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The Life and Work of Mark Jacobi: Clarinet Repair in Philadelphia and the Influence of Hans Moennig

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THE LIFE AND WORK OF MARK JACOBI: CLARINET REPAIR IN PHILADELPHIA
AND THE INFLUENCE OF HANS MOENNIG

A Monograph

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Musical Arts

in

The School of Music

by

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B.M., University of Central Florida, 2008
M.M., Louisiana State University, 2011
December 2014

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ABSTRACT

Since the invention of the clarinet there have been instrument repairmen and technicians who have properly maintained and serviced those instruments. This project presents the life and work of Mark Jacobi, one of the most influential clarinet repair technicians of the twentieth and twenty-first centuries. It connects the lineage of clarinet repair in Philadelphia and the life and traditions of Hans Moennig with the work currently being done in Mark Jacobi's repair workshop.

This document outlines the evolution of the clarinet barrel from its early incarnation as an attached extension of the mouthpiece section to its modern state as a 'reverse-taper' design perfected by Hans Moennig. It also presents an apprentice training guideline used by Mark Jacobi with commentary support from Melanie Wong, Jacobi's most recent apprentice.

Interview based, this project contains perceptions, experiences, and commentary from Mark Jacobi's closest friends, clients, and colleagues. Professionals including Deborah Chodacki, Sam Caviezel, Mark Nuccio, Greg Raden, and David Gould share their personal experiences and perceptions in order to tangibly describe the quality of Mark Jacobi's work. In all, the document attempts to humanize a figure of contemporary legend in order to be accurately portrayed and received by future generations.

INTRODUCTION: REASONS FOR THIS RESEARCH

The relationship of the performing artist and the instrument repairman has always been an essential association for keeping instruments in working order. Comparable to the expertise it takes to play the clarinet, the skills of the repairman are paramount for keeping the instrument functioning properly. For some repairmen, the act of repairing clarinets is viewed merely as a trade skill or means to make a living. However, for a select few, the craft is viewed as an art form, a craft that ultimately advances the musical possibilities available to performers.

For many clarinetists of the early to mid-twentieth century, the name Hans Moennig has been synonymous with incredibly high-level instrument repair. For Moennig, repairing was not just about the ability to have the instrument function properly in that instant. It was also about having the knowledge and foresight to extend the life of the instrument, to notice and correct potential future mechanical issues, and to advance the standards of proper instrument care. Although Mr. Moennig is no longer with us, the ideals he set in motion are still practiced by a small contingent of repairmen today. One of these repairmen is named Mark Jacobi. This project will attempt to connect the ideals shared between the work of Hans Moennig and Mark Jacobi.

After a long time searching for a quality repairman on whom to base this project, it became clear that finding a true master of the craft was going to be difficult. I chose to seek out the guidance of my adviser at Louisiana State University, Deborah Chodacki, and gain her insight into this highly specialized field. Together we discussed the work of Hans Moennig and what made his craftsmanship so renowned. Each time we diverged from the topic of Moennig in our conversation we always ended up discussing the work currently being done by Mark Jacobi in Philadelphia. After an initial Google search of the name Mark Jacobi yielded nothing more than a phone number, I knew that someone so highly regarded in the clarinet community needed

to be documented. Further investigation confirmed that Mark Jacobi, one of the most sought-after clarinet repairman in the United States, had never been the subject of any published material.

This document will explore many topics related to the concept of clarinet repair. In addition to a biography of Mark Jacobi, it will cover the life of Hans Moennig, a brief history of the clarinet barrel with supplemental information on the now famous Moennig ‘reverse-taper’ barrel, and a detailed guide of Jacobi’s apprentice training regimen. The document will also include important observations related to the physical layout of Jacobi’s workshop, his interactions with customers, and his business practices. Also, with the city of Philadelphia being a connecting theme between many great repairmen, the project will present information and rationale as to the correlation between the two.

Since the approach to clarinet repair and quality differs with each repairman, it is important that we document the processes used by those who are considered leaders in the field. For this document, the primary process for data collection will be live interviews directly with Mark Jacobi and those who have worked closely with him. An online questionnaire was created with questions on Mark Jacobi for those individuals unable to have a live interview. This questionnaire follows the same format as the live interviews and covers all of the same subject material.

Ultimately, through the research process I hope to draw connections between the repair styles and techniques of Moennig and Jacobi. This will lead to an understanding of why so many professional clarinetists gravitate towards the work of Mark Jacobi. This knowledge will allow for a growth in the collective understanding and implementation of quality woodwind repair in the United States. Finally, through the monograph I will document the work of Mark Jacobi in a

way that will provide a resource for further exploration into the topic of clarinet repair and innovation by future generations.

CHAPTER 1: CLARINET REPAIR IN PHILADELPHIA AND HANS MOENNIG

1.1 Repair in Philadelphia

Philadelphia, Pennsylvania has been a central location for instrument makers and musicians since before the United States declared its independence from Great Britain. Since the city's founding in 1682 by the colonist William Penn, Philadelphia has been one of the busiest port cities in America. A booming center of governmental and economic activity, the city was the early home of several arts organizations such as the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts (1787), the Academy of Natural Sciences (1812), and the Franklin Institute (1824). These early institutions created the need for more highly specialized skilled labor and attracted artisans to the city from many European countries.

One of the earliest artisans to establish himself as an instrument maker in Philadelphia was Jacob Anthony.¹ A maker of all woodwind instruments, he is considered to be the first clarinet maker, not only in Philadelphia, but also in America. Beginning in 1785, Anthony, along with his son Jacob Anthony Jr., were listed in the Philadelphia directories as instrument tuners and makers. They specialized in making and repairing flutes, recorders, oboes, clarinets, and fifes.² The Anthony family effectively began the lineage of quality woodwind instrument repair in the Philadelphia area.

Other early instrument makers in America included Heinrich Christian Eisenbrandt and Heinrich Gottlob Gütter, both of whom began their careers in and around the Philadelphia area.³ Eisenbrandt came to the United States in 1808 and worked closely with Jacob Anthony, learning and studying the art of instrument making before establishing his own business in New York

¹ Rice, Albert R., *The Clarinet in the Classical Period* (New York, New York: Oxford

² Albert R. Rice.

³ Albert R. Rice.

City in 1815.⁴ After several years, he returned to the Philadelphia area, opening a repair shop in Baltimore, Maryland, where he remained until 1849. Gottlob Gütter opened his early repair shop in Bethlehem, Pennsylvania (near Philadelphia) in 1819. The appearance of these early instrument makers in the Philadelphia area were clearly the result of an early need for quality craftsmanship and repair work among instrumentalists of the time.

1.2 Hans Moennig

At the turn of the twentieth century, Hans Moennig, known to many as one of the greatest woodwind repairman in the United States, was born in a small town called Markneu-Kirchen (East Germany) in 1903.⁵ Eventually settling in Philadelphia, he effectively continued this lineage of quality craftsmen in the city.

In Germany, the Moennig family had a factory where they built and repaired all types of woodwind instruments. Upon a request from his cousin Walter Guetter, principal bassoonist with the Philadelphia Orchestra, Moennig decided to move to the United States in 1923. Before opening up his own business, Moennig worked for several other instrument companies. His first job in the United States was working with G. Pruefer, a well-known clarinet maker in the early part of the twentieth century. In 1924, he worked for the Cundy-Bettoney Company in Boston making clarinets.⁶ After returning to Germany to help with the family repair business for several years, his cousin persuaded him to, once again, return to Philadelphia and open his own repair shop noticing a need for quality instrument repair in the city.

His return to Philadelphia also marked the transition from Henri Chedeville, then Philadelphia's premiere woodwind repairman and clarinet mouthpiece craftsman, to Hans

⁴ Albert R. Rice.

⁵ Zeter, Stuart, June Zeter, "A Pictorial Essay on Hans Moennig," *The Clarinet Magazine*, February 1983.

⁶ Stuart Zeter, June Zeter.

Moennig. Henri, along with his cousin Charles Chedeville, had been the leading woodwind and repair technicians in Paris during the turn of twentieth century. Around 1910-13, Henri had moved to the Philadelphia area and opened his own instrument repair shop.⁷ Michael Guerra, later teacher of Mark Jacobi, helped finance this new venture for the Chedville family.⁸ There, he sold customized mouthpieces and serviced the instruments of top local clarinetists from around the Philadelphia area. The figure below shows Henri Chedeville and his son, Marcel, outside of their music shop in Philadelphia:

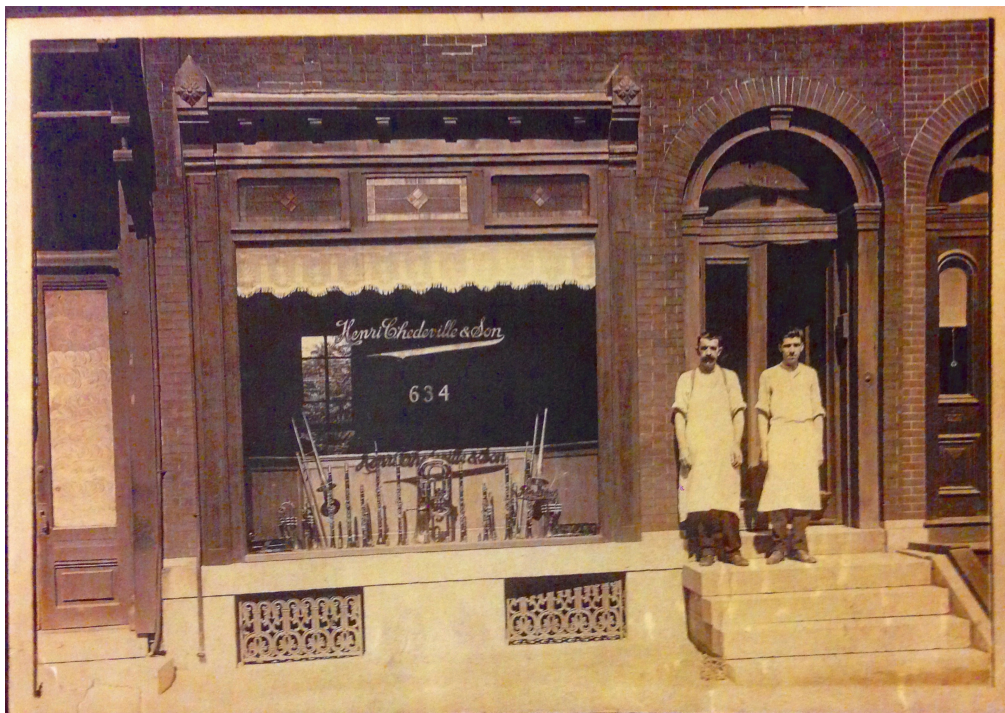


Figure 1: Photo of Henri and Marcel Chedeville ca. 1920s

For nearly 30 years, the Chedeville family dominated the field of instrument repair. Up until his untimely death in 1932, Henri Chedeville was the leading woodwind repair technician in the area.⁹ Marcel attempted to take over the repair business, but was ultimately unsuccessful at

⁷ Wodkowski., Ramon, "A Brief History of Charles and Henri Chedeville Mouthpieces", LBD Corporation, <http://chedvillemp.com/rbuy/history-mouthpieces/> (accessed June 13 2014).

⁸ Jacobi, Mark. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁹ Ramon Wodkowski.

maintaining the business that his father had sustained for so many years. He eventually closed the repair shop and slowly faded into obscurity, taking a job repairing instruments for United States military bands.¹⁰

Although tragic for the Chedville family business, the failure of Marcel Chedville to keep his father's business and legacy alive gave Hans Moennig the opportunity to establish himself as a prominent craftsman in Philadelphia.¹¹ Upon his return from Germany after helping with the family business, Moennig's first client was Robert McGinnis, then a student at the Curtis Institute of Music and later principal clarinet of the Philadelphia orchestra.¹² Daniel Bonade, one of the most influential clarinetists of the twentieth century, another early client, remarked, "I thought that the clarinet had been perfected as far as it could be until I met Mr. Moennig."¹³ Establishing these connections early on in his career gave Moennig a reputation for quality craftsmanship and uncompromising artistry. These perceptions from clients along with his meticulous nature as a repairman cultivated an ever-increasing demand for his work.

Hans Moennig was most known for his perfectionism and intense concentration while working. These qualities stemmed from years of regimented self-discipline and an almost unwavering daily routine. Starting his day just before dawn, he would perform physical exercises recommended by the Royal Canadian Mounties.¹⁴ By 8:00 a.m. he was already working on unfinished instruments from the previous day. He would work tirelessly through the day,

¹⁰ Ramon Wodkowski.

¹¹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹² Stuart Zeter, June Zeter.

¹³ Stuart Zeter, June Zeter.

¹⁴ Stuart Zeter, June Zeter.

stopping only when he had completed his daily goal(s), which was usually around 7:30 p.m.¹⁵

Oftentimes, Moennig would work much later into the night if a particular repair demanded it.

With over fifty years working to repair and innovate woodwind instruments, Moennig developed relationships with many top orchestral players. These personal and professional connections Moennig made with orchestral players allowed him to see issues with woodwind instruments that he would not have had access to otherwise. Years of diagnosing and fixing these complex issues developed Moennig's intuitive sense for manipulating the instruments to achieve the result he and his clients desired.

Continuing to repair clarinets until the early 1980s, Hans Moennig eventually decided to retire to due health reasons. Hans Moennig officially retired from repairing instruments on July 5th, 1983.¹⁶ Although technically retired, Moennig continued repairing clarinets out of his home for a very select list of clients. He would occasionally use Mark Jacobi's workshop in order to use larger and more specialized pieces of machinery.¹⁷ This continued until his death in 1988.¹⁸

Several years prior to the retirement of Hans Moennig, Mark Jacobi (see chapter 2 for a full biography of Mark Jacobi) launched his own career repairing clarinets in Philadelphia. This overlap allowed Jacobi to develop professional relationships with many of Moennig's customers, including the famous pedagogue David Weber. Jacobi essentially continued the legacy that Moennig had maintained during his fifty-year career in Philadelphia with regards to clarinet. As musicians started to take notice and appreciate the work of Jacobi, it was as if there had not been any lapse in the availability of quality craftsmanship in the city once Moennig officially retired.

¹⁵ Stuart Zeter, June Zeter.

¹⁶ Webster, Daniel, "Farewell to the Master Leaving His Musical Mecca," *International Double Reed Society Journal* 1983.

¹⁷ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹⁸ Daniel Webster.

1.3 Impressions of Repair in Philadelphia Among Professionals

For this project, several prominent clarinetists from around the country who currently use Mark Jacobi for their repair needs were asked to give their perceptions as to why Philadelphia has been historically perceived as a centralized location for quality clarinet repair in the United States. In a statement written from Gregory Raden of the Dallas Symphony Orchestra about the lineage of great clarinet repairmen in Philadelphia, he remarked:

Philadelphia was the birth of the American school of wind playing with the teachings of the great oboist Marcel Tabuteau. You had many of the countries [*sic*] finest wind players here in the Philadelphia Orchestra in the first part of the twentieth Century [*sic*]...(Marcel) Tabuteau, (Daniel) Bonade, Walter Gehter, (William) Kincaid, (John) DeLancie, (Ralph) McLane, etc. It made sense to have the top repairmen in town and nearby other major musical hubs like New York.¹⁹

With Philadelphia being the ‘birthplace’ of woodwind playing in the United States, it is only natural to expect a need for exceptional craftsmen to maintain the instruments in the immediate and surrounding areas.

David Gould, clarinetist and representative for the Vandoren Company, continued these sentiments by saying:

...I do know that Moennig attracted clarinetists from all over the country. He was "the" [*sic*] repairman, as I knew it. I believe Mark (Jacobi) had spent some time with Moennig, not as an apprentice but more like a client, and picked up on the traditions shared by many of the area players from that area.²⁰

Sam Caviezel of the Philadelphia Orchestra believes that the need for high quality repair work in Philadelphia developed concurrently with the influx of incredible artists and musicians to the city during the late nineteenth and early twentieth centuries. With this influx of talent,

¹⁹ Raden, Gregory. Questionnaire by John Coppa, Dallas, TX, August 28, 2014.

²⁰ Gould, David. Questionnaire by John Coppa, New York, NY, August 21, 2014.

development of great music organizations like the Philadelphia Orchestra, the New York Philharmonic, and the National Symphony Orchestra began to take shape.²¹

Additionally, the musical training institutions in Philadelphia played a prominent role in the development of high artistic prowess in the area. Mark Nuccio of the New York Philharmonic believes that the founding of musical institutions like the Curtis Institute of Music in 1924, the Settlement Music School in 1908, and Temple University in 1893 cultivated an atmosphere for musical talent.²² The institutions employ faculty from great orchestras, like the Philadelphia Orchestra, that attract many talented young musicians to the area. These young musicians usually demand the same high quality maintenance on their instruments as professionals in order to progress and develop musically.

It's clear that the Philadelphia area was and is home to an incredible amalgamation of artists and musicians. With the musical demands placed on artists and musicians so too are the demands for great repair craftsmanship from those individuals. For clarinetists, Hans Moennig met these demands for over a half-century. Upon Moennig's retirement, Mark Jacobi was able to pick up exactly where Moennig left off with regards to clarinets. His skill and talent for the craft make Mark Jacobi one of the most in-demand clarinet repairmen in the world.

²¹ Caviezel, Sam. Interview by John Coppa, Baton Rouge, LA, August 4, 2014.

²² Nuccio, Mark. Questionnaire by John Coppa, New York, NY, September 7, 2014.

CHAPTER 2: BIOGRAPHY OF MARK JACOBI

2.1 Early Life

Mark Jacobi was born on September 3rd, 1953 in Camden, New Jersey, to parents Allen Starr Jacobi and Charlotte Lauria. Originally known as a center for the production of glass with the company Gloucester Glass Works, the town of Camden was where Jacobi was born. However, Jacobi spent his youth in the nearby town of Clementon, New Jersey. Jacobi attended elementary, middle and high school in Clementon and developed an early passion for music. While attending secondary school at Overbrook Regional high school, Jacobi began playing the clarinet at the age of 13. His parents purchased his first clarinet, a *Fontaine* brand clarinet, from a music store in New Jersey owned by Frank Masuka.²³ Jacobi's high school band director, Mr. Richard Graham (a trombonist by trade) at Overbrook Regional served as his first clarinet instructor. After just over a year of studying with his band director, Jacobi was progressing beyond the guidance that his band director could provide. Jacobi's parents sought out a new teacher for him that specifically specialized in clarinet. So it was that Jacobi was to begin taking lessons with freelance clarinetist of the Philadelphia area, Michael Guerra. Still a full-time clarinet instructor at the age of 82, Guerra took Jacobi on as a student and began teaching him just as he had done for countless young students in the past. Jacobi studied with Michael Guerra beginning directly before his freshman year in high school (1968) and continued until he attended college at the age of 18 in 1972.

²³ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

2.2 Studying with Michael Guerra

Michael Guerra was considered by many to be one of the greatest clarinet pedagogues of his generation and Mark Jacobi considers himself very fortunate to have studied with him.²⁴

Guerra was renowned for incredible intonation, flawless technique, and an ability to play nearly anything at sight.²⁵ These musical abilities developed early for Guerra, even before progressing to playing the clarinet. Guerra realized as a young man that he must develop Solfège and aural skills in order to become a great musician.²⁶ So, everyday for six months in middle school Guerra intentionally skipped school to study his Solfège books in an empty room at a local ice factory.²⁷

The aural skills that Guerra developed early in his musical training profoundly shaped the way he would teach his students in the future. Michael Guerra eventually began studying clarinet with some of the great teachers and performers of the century including Alexandre Selmer and Daniel Bonade.²⁸ During certain lessons, Daniel Bonade would attempt to find the most difficult musical passages he could and force Guerra to read them perfectly at sight. This aspect of Guerra's lessons with Bonade eventually translated into a major component of his own teaching method. Guerra would not only have his students sight-read published works and études, but he would even hand-write out improvised exercises based on what he felt a specific student needed to work on.²⁹ The ability to sight-read well was the skill that gave Guerra a competitive edge over other clarinetists of the era; a technique he wanted his students to develop.

²⁴ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

²⁵ Hegvik, Arthur, "The Years of Mike Guerra, Part I: The Virtuoso," *Woodwind Magazine*, June 1971.

²⁶ Arthur Hegvik.

²⁷ Arthur Hegvik.

²⁸ Arthur Hegvik.

²⁹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

Mark Jacobi's lessons with Michael Guerra were very different than the average weekly one-hour lesson prescribed by most teachers today. For example, a typical lesson with Guerra would often last several hours at a time. In conjunction with that, lessons were every two weeks rather than each week. This allowed Jacobi time to practice the multitude of repertoire and exercises assigned at each lesson. Guerra would have Jacobi work on many standard etude books such as the C. Rose 32 & 40 studies, the Kroepsch studies, and the Cavallini Caprices. In addition to requiring these etude methods, Guerra often wrote out short exercises relating to the specific aspect of clarinet playing Jacobi was struggling with. These exercises were expected to be practiced at the start of every practice session to insure a complete mastery of subject area. Additionally, these customized exercises were often played for at least an hour each lesson before Guerra continued with either the etudes or repertoire assigned for that week. As mentioned previously, another notable aspect of Jacobi's lessons with Guerra was the large amount of sight-reading. Jacobi says that sight-reading was a hallmark of Guerra's teaching and that he would occasionally spend hours playing through new repertoire during a lesson. Jacobi also notes that Guerra instilled in him a true sense of history with regards to clarinet pedagogy and this was certainly reflected in the style in which he taught his students.

Jacobi considers Guerra to be his greatest musical influence saying, "(Michael) Guerra had a big influence on my life. He prepared me for my college auditions. Without him, I probably wouldn't have been ready."³⁰

2.3 High School and College Years

After high school and his time studying with Michael Guerra, Jacobi auditioned at two schools in order to pursue a career in clarinet performance; Temple University in Philadelphia

³⁰ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

and The New School in Philadelphia.³¹ Although nothing was to come from his audition at The New School where Ron Reuben was professor of clarinet, Jacobi was given some invaluable advice from Herbert Hesch, then Dean of the school. He told Jacobi that most people did not make a substantial living from music so he needed to find a specialty that people demanded.³² This advice would later aid in Jacobi's decision to pursue the craft of repair. Ultimately, Jacobi made the decision to attend Temple University in Philadelphia and pursue a major in clarinet performance. It is Guerra who Mark credits with getting him into Temple University. At the time, Michael Guerra and Anthony Gigliotti, principal clarinet in the Philadelphia Orchestra and professor of clarinet at Temple University, were close friends and colleagues and this relationship allowed Jacobi to audition for Gigliotti apart from the official public auditions held at the university. With a glowing recommendation prior to his audition from Guerra, the actual audition was merely a formality according to Jacobi.³³ For his audition, Jacobi played major and minor scales and the Solo De Concours by Henri Rabaud. Gigliotti, very impressed with Jacobi's talent and abilities, quickly accepted him into Temple University.

Mark Jacobi studied at Temple University for only one academic year, 1972-1973. It was during this time that he realized that a career in performance was not really for him. "The idea of having to make sure my reeds were always perfect was not appealing to me," Jacobi said.³⁴

He wanted to spend his time doing something a bit more finite that also emphasized the technical (mechanical) aspects of the clarinet. After much consideration, Jacobi confronted his teacher Gigliotti at Temple University and expressed his interest in pursuing clarinet repair as a

³¹ *The New School was a small conservatory in Philadelphia opened in the later portion of the 1960s. It was modeled off of the Curtis Institute of Music in Philadelphia and was eventually absorbed by Temple University.

³² Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

³³ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

³⁴ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

career. He was concerned that Gigliotti would not be receptive of this new career plan. Much to Jacobi's surprise, Gigliotti was actually very supportive of the idea and even consulted with the Selmer Company (of the now famous Conn-Selmer Brand) on ways for Jacobi to pursue this new venture. Selmer recommended several schools for repair, including the Allied Supply Corporation School of Musical Instrument Repair in Wisconsin, Western Iowa Tech Community College, which had a band instrument repair program at the time, and the Eastern School of Instrument Repair in New Jersey.³⁵ Although Mark did not choose the first of the two repair schools recommended by Selmer, he did finally select the third option which was the Eastern School of Instrument Repair. Ultimately, Mark wanted to choose a repair school that was both cost effective and relatively close to the south New Jersey/Philadelphia area.

2.4 Instrument Repair School

With the support and blessing of his teacher Anthony Gigliotti, Jacobi enrolled in the Eastern School of Instrument Repair in Union, New Jersey during the fall of 1973. The school was actually a division of a larger music store called the Dorn and Kirschner Band Instrument Company. Shortly after opening the store, Fred Kirschner along with his brother Irving Kirschner started the repair school division of the company and titled it the Eastern School of Instrument Repair.³⁶ Fred Kirschner was chosen to oversee and direct the repair school while Irving remained focused on other aspects of the business such as sales and bookkeeping. Jacobi was initially very excited about the program and learned a lot during his early studies. Fred Kirschner was considered Jacobi's primary instructor, but rarely actually taught Mark or the other students directly. According to Jacobi, Kirschner would mostly have his assistant teach the

³⁵ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

³⁶ Fred Kirschner's obituary (Source undetermined). A photocopy of the document was provided by Mark Jacobi.

students of the repair school while he spent most of each morning in his office talking on the phone. However, Kirschner did make himself available for one-on-one sessions as needed. Jacobi notes that although Kirschner stressed the importance of quality craftsmanship to his students, he disliked working for professional musicians. However, despite Kirschner's shortcomings, quality craftsmanship and "neat-looking" work were the main messages Jacobi absorbed from his time with Kirschner. This idea of working to the best of one's ability and never compromising quality were ideals instilled in Jacobi by Fred Kirschner.

During the program at the Eastern School of Repair, Jacobi spent much of his day practicing repair techniques under the supervision of Kirschner's many assistants. Running Monday through Friday from 8:00 a.m. to 3:00 p.m., the program allowed Jacobi to have ample time to repeat and practice the techniques that Kirschner taught during his daily morning repair lecture. The program, as a whole, was designed to cover the repair and maintenance of every brass and woodwind instrument; however, Jacobi was only really interested in learning to repair clarinets. Even though Jacobi only had interest in clarinet repair, he did assimilate many techniques for working with brass instruments, including metalworking and soldering. Interestingly, while at the Eastern School of Repair, Jacobi would often visit the workshop of Hans Moennig in order to observe and learn from his technique.

After spending close to a year and a half studying at the Eastern School of Repair, Jacobi realized that he had learned all of what Fred Kirschner had to offer on the topic of repairing clarinets and decided to leave the program early.³⁷ This decision came about because the program was nearing completion and the focus for the remainder of the course would be entirely on repairing saxophones, an interest the Jacobi simply did not have.

³⁷ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

2.5 The Professional Years

In 1975, after Mark Jacobi left the Eastern School of Repair, he decided to move back to the Philadelphia area. Upon arriving, he quickly opened his first professional repair shop at 13th Street and Sansom Street which, at the time, was not the safest of neighborhoods in Philadelphia.³⁸ The repair shop was located on the second floor of the building overlooking a quite unsavory bar. He remained at this location for one year before realizing that he was in desperate need of more space to work. With the need for more space, Jacobi “ran out” his lease and decide to move to another location. This new space was in a building that happened to be located diagonally across from the first shop and was, again, set on the second floor. Ironically, the business occupying the first floor of this building was a store specializing in fitting hearing aids for the hearing impaired. This larger location was the home of Jacobi’s repair shop for the next three years.

Living at home with his parents across the river in New Jersey, the larger shop at 13th and Sansom was an ideal situation for Jacobi financially. It allowed him to invest more in repair equipment rather than spending that same capital on rent or other extraneous business expenses. Instead of paying rent for both a business and residential space, Jacobi was able to forgo paying rent for a place of residence.

As Jacobi began to establish a reputation in his first few years repairing clarinets professionally, he also met and became close friends with clarinetist David Weber of the Julliard School, New York Ballet Orchestra and CBS Symphony.

³⁸ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.



Figure 3: Mark Jacobi and David Weber outside of the Buffet-Crampon Factory in France

It was clarinetist, William Blayney who first introduced Jacobi to David Weber. Weber, up until this point, had used Hans Moennig exclusively for all repair inquiries.³⁹ However, towards the end of his career, Moennig became increasingly more unreliable about being able to keep up with the repair demands of professional players. With the recommendation of Moennig, Weber started having Jacobi repair his clarinets. Weber liked Jacobi's work very much and this relationship between the two would eventually prove to be extremely advantageous for Jacobi. Weber introduced him to the Buffet Crampon Company which eventually led to an opportunity to intern there and later become a repair technician for the Gottenburg Symphony Orchestra in Sweden.

Mark Jacobi's relationship with Hans Moennig originally began during his time studying at Temple University. He and his fellow classmates studying with Gigliotti would frequently bring their clarinets to Moennig for repairs and minor adjustments. It was during this time that

³⁹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

Jacobi started building a rapport with Moennig that would eventually blossom into a rewarding professional relationship. Even before attending repair school, Jacobi was able to assimilate specialized repair techniques from Moennig and observe how a repair shop operated. Once Jacobi had established his own presence in Philadelphia, Moennig would often refer customers to him when overwhelmed with repair requests.⁴⁰ This spoke volumes about the quality and precision of Mark's work. A recommendation from Moennig was a highly rare occurrence. Even Moennig's only apprentice, Casimer Lucazycki, took decades to earn this type of recommendation from him. Jacobi had never studied formally with Moennig yet still earned this professional recommendation.

Due to the high regard that Moennig had for Jacobi's work, a partnership between the two almost happened upon the sudden passing of Lucazycki. Lucazycki had been occupying his own space for repairs just in Moennig's repair shop in same building. With the space now available, Moennig offered it to Jacobi. Unfortunately, Jacobi still had several months left on his lease at 13th Street and Sansom and was unable to move to join Moennig.⁴¹

After it became known that his landlord was in default on his property taxes, Jacobi was forced to relocate his repair shop once again. Quickly trying to find a suitable space, he learned of an open space in a building at 1930 Chestnut Street. It was a space in the south Philadelphia area with plenty of room for all the equipment Jacobi needed. This location was to remain Jacobi's primary shop for around the next decade and a half.⁴²

Jacobi's inability to accept the offer to move into Lucazycki's space and start a partnership with Moennig ultimately proved to be more beneficial. Moennig was becoming quite

⁴⁰ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁴¹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁴² Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

elderly and his landlord wanted him out after several instances of gas valves being left on.⁴³

Actually, Jacobi was planning to accept the offer, however the plans were complicated by the situation with Moennig and his landlord. Jacobi eventually ended up leaving his repair shop 13th Street and Sansom after a problem with his own landlord arose. So it was that Mark Jacobi was to move to his next location at 1930 Chestnut Street for the next eighteen years and service the instruments of clarinet players from around the United States.

During this time at 1930 Chestnut Street, Jacobi developed a relationship with an aspiring repairman and decided to take him on as an apprentice. After some time and much consideration, the two went into business together repairing and selling clarinets. They spent only a short time collaborating before they mutually decided to part ways. Jacobi, in need of a new space to work, moved his operation to his place of residence at the time, 20th Street and Walnut.

Although this was a minor setback, Jacobi was determined not to let this affect his passion for repairing clarinets. In addition to his own private repair work in the Philadelphia area, he quickly found other work repairing instruments for a music store in New York City called Roberto's Winds Incorporated. For several years, Jacobi both lived and worked at Roberto's Winds. He slept most nights in an upstairs apartment that also served as a storage room for the music store. After about two years, the storage room was converted into a usable space and Jacobi no longer had a place to stay. Instead he commuted back and forth from Philadelphia to New York City nearly every day of the week. After much consideration, Jacobi realized that he had to make the difficult decision to either move to New York City or stay in Philadelphia. Ultimately, Jacobi decided to stay and work in Philadelphia.

⁴³ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

During this time, c. 1990-1992, Jacobi met the acquaintance of Olla Shill, then principal clarinetist with the Gottenburg Symphony.⁴⁴ After a visit to Philadelphia to experience Jacobi's high level of craftsmanship for himself, Shill, along with the orchestra, invited him to come service instruments with the orchestra in Sweden. The invitation was a several month residency with the orchestra repairing only clarinets. During the first trip working in Sweden, Jacobi was kept busy repairing instruments from the orchestra. In subsequent trips, he would repair instrument from local musicians and students from around the area (see below). After a very successful first visit, Shill asked Jacobi to return to work for the orchestra every few years. The trips were fully funded by the Gottenburg Symphony and Jacobi was paid for his services based on the amount of work he did during each visit. In all, Jacobi visited Sweden four times to do repair work for the orchestra.

After his first visit to Sweden, c. 1990, the orchestra management suggested that Jacobi work through a local music store called "Magnuson Musik" owned by the man named Lurie Tiamivori. Although pervious trips to Sweden were both productive and profitable for Jacobi, the orchestra's ability to pay Jacobi directly was becoming increasing difficult due to tax regulations. Tiamivori had worked with the orchestra previously and presented the idea of Jacobi repairing and overhauling clarinets at his music store. At Tiamivori's store, Jacobi was not only going to be repairing instruments for the orchestra, but also for local musicians and regular clients. Upon the completion of his residency, Jacobi was paid based on the total amount of work accumulated from both the music store and the orchestra. While working at the "Magnuson Musik" for the first time, Tiamivori offered Jacobi a full-time job working there. Jacobi gave this a lot of consideration, returning every few years to work to see if moving there permanently was the

⁴⁴ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

right chose for him. After much consideration, Jacobi declined the offer and remained in the United States. The situation stands as a testament to the ever-increasing demand for his work and craftsmanship.

Mark Jacobi has also spent time working in a several other places around the world. These locations include Buenos Aires, Argentina and Oslo, Norway.

2.6 Married Life

In 2002, Jacobi met his soon-to-be wife Leslie Abend. The two were both members of the online dating website “Metrodate.com” and began corresponding after Jacobi noticed an interesting photo on Abend’s profile page. The picture was of the famous Montmartre Cemetery in Paris, taken when Abend was on a Fulbright scholarship in Paris. Jacobi had actually lived directly behind the cemetery during his internship at Buffet Crampon. The photo sparked a conversation between the two and after a week they were planning their first date. The plan for their first date was to go to lunch and if they “hit it off,” they were to make later plans to attend a concert of Béla Fleck, the world-famous banjo player. Interestingly, Jacobi did not have any photos of himself on his profile so Abend was left to imagine what he looked like prior to their meeting, but admits that she recognized him instantly from their correspondence despite not having a photo of him.⁴⁵ They met outside of a subway station in center city Philadelphia. Thus began their courtship.

Abend and Jacobi dated for six months before deciding to move into their current home in south Philadelphia at 1824 South Carlisle Street. During this time, they began to discuss the real possibility of marriage. However, because both of them were nontraditional, the standard “down on one knee with a diamond ring” proposal was not really something Jacobi or Abend had

⁴⁵ Abend, Leslie. Interview by John Coppa, Philadelphia, PA, April 17, 2014.

in mind. Instead, Jacobi proposed by giving Abend a painting (pictured below in figure 4) that the two lovingly refer to as the “Painting of Pigeons.”



Figure 4: Mark Jacobi’s Engagement Gift to Leslie Abend: “Painting of Pigeons”

Fitting with their creative personalities, Jacobi and Abend both have a strong affinity for Halloween and wanted this to be the setting of their wedding. Every aspect of the wedding was planned with their Halloween wedding date in mind. They even designed their own attire for the wedding. Abend’s mother created a wedding gown based on a medieval pattern and Jacobi fabricated an elaborate headpiece (pictured below in Figure 4) adorned with skeletons, snakes, feathers, and a black cat in orange pants playing clarinet.



Figure 4: Mark Jacobi's Wedding Headpiece

Even the music selections were specifically Halloween themed. As prelude music, “Danse Macabre” by Camille Saint-Saëns was played on the piano and Ron Reuben played Artie Shaw’s *Nightmare* on Bb clarinet. A full clarinet choir performed the “Queen of the Night” aria from W.A. Mozart’s opera *The Magic Flute*, as Abend processed down the aisle.⁴⁶ Sam Caviezel, close friend and client of Mark Jacobi, played *La Plus Due Lente* on solo Bb clarinet. Also included in the ceremony was a traditional Mexican *Banda* that accompanied Mark as he processed down the aisle, playing the piece *Los Dos Nunca Muerte* (translated from Spanish as *The Two Never Die*) that Jacobi personally arranged. As recessional music, the *Banda* played an arrangement of the theme from the 1963 film *8½*.⁴⁷ After marrying in 2004, Jacobi and Abend continued their lives together in their current home at 1824 South Carlisle Street. The home also now serves as Jacobi’s current clarinet repair workshop.

In 2010, Mark Jacobi underwent coronary bypass surgery. Many friends, relatives, colleagues and customers worried about Jacobi’s prognosis. They feared that a legendary

⁴⁶ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁴⁷ Leslie Abend. Interview by John Coppa, Philadelphia, PA, April 17, 2014.

craftsman in the field of clarinet repair would be prematurely taken. Thankfully, Jacobi fully recovered from his bypass surgery after several months and continued exactly where he left off, servicing the instruments of amateurs and professionals alike.

2.7 Mark Jacobi Today

Since his surgery, Mark Jacobi remains focused on providing the best quality craftsmanship possible to clarinetists from around the world. As his work continues, he continues to grow professionally. He maintains a core client list from premiere orchestras including the Philadelphia Orchestra, New York Philharmonic, Rochester Philharmonic, the National Symphony Orchestra, the Cleveland Orchestra, and the Dallas Symphony Orchestra. For Jacobi, his skill as a craftsman continues to grow as he works on the instruments of the next generation of young clarinetists who visit his workshop.

CHAPTER 3: MARK JACOBI'S WORKSHOP AND OBSERVATIONS ON HIS TECHNIQUE

3.1 Introduction

The repair workshop of Mark Jacobi is situated in one of South Philadelphia's old Italian neighborhoods in the basement of his home at 1824 South Carlisle Street. Entering the home, one is often greeted by his lovely wife Leslie Abend and their two cats. The home is filled from wall to wall with paintings, art, sculpture and memorabilia from the couple's favorite time of year, Halloween. Full of color and life, the home is clearly representative of Jacobi and Abend's creative personalities. Everything from the eclectic furniture to the wedding headpiece that Mark personally designed for himself is on display and serves as a testament to the uniquely creative style exuded by the couple.

3.2 The Workshop Layout

Walking through the entryway and entering the living room offers a better view of the creative thought put into designing the space. Display cases hung around the room hold much of the Halloween memorabilia that Jacobi and Abend have collected from their travels around the world over the years. The memorabilia includes many male and female skeleton figurines, various devilish figures, colorful Faberge-like eggs and figurines of many pop-culture icons over the past several decades.

Moving further into the home, the entrance to Jacobi's basement workshop is hidden by a slatted wooden door just off the living room covered with hanging coats and scarves. Just through the door is a narrow entryway connected to a steep staircase descending to the workshop. Starting in the entryway to the staircase, framed photographs line the walls covering every available space to the main floor of the basement. The photographs are nearly all headshots from Jacobi's clients signed with personal messages of gratitude to Jacobi. These gifts are a

testament to his extensive client base and their respect and appreciation for his work. This is something that Jacobi has earned during a career of repairing clarinets.



Figure 5: Photo of Michael Guerra signed to Mark Jacobi

The staircase to the basement ends almost directly in the middle of the approximately 25x15 foot workshop space. To the left of the staircase is a shelf packed with stacked pieces of grenadilla wood used for fabricating clarinet joints such as barrels, bells, and upper/lower joints. At the top of the shelf stands a very rare clarinet designed and built by Hans Moennig, complete with original key-work and pads. This clarinet was originally sent from Germany from Moennig's family in pieces. Once delivered, Moennig assembled the clarinet and outfitted it with his personal customizations. The shelf also holds several clarinets from clients that have been mailed to Jacobi for repair. These instruments are usually set up and ready to be worked on in the

order in which they were received. Often, Jacobi's personal discretion as to the repair aspect he would like to focus on in a given moment will determine which clarinet is worked on.

Adjacent from the shelf is a modified jeweler's bench, no bigger than an antique writing desk, which serves as Jacobi's main workstation. The bench is packed with tools ranging from needle-nose pliers to specialized screwdrivers capable of removing even the tiniest of screws from the clarinet. Although Jacobi did not think his workspace was particularly organized, the tools he used seemed to be placed in a way that put the most frequently used tools at the most accessible spots on the bench. From the seated position that Mark Jacobi works, the main work surface came to about chest-height with four drawers directly below used for either additional working surface or storing repair materials such as glue and replacement pads.

Adjacent to Jacobi's main workstation sits a desk and bookshelf containing numerous books on clarinet repair and general music history. During the interview process, Jacobi referenced these sources for more clarification on several topics such as biographical information on his former teacher Michael Guerra. On the desk sits a computer and several logbooks for keeping accurate records of customer repair charges.

The figure below is a photo of Mark Jacobi's workbench on a typical day of repairing clarinets. Due to his meticulous nature, he will often have every possible material needed for a particular job at his disposal. Even a simple pad change may take multiple attempts of either exchanging the pad for a different material type or finding a specific pad among one material type that "feels" right.



Figure 6: Mark Jacobi's main repair workbench

3.3 Work Schedule and Business Practices

Mark Jacobi is by all accounts a very hard and diligent worker. Since he prides himself on doing the absolute most precise job he can, time never seems to be of much concern to him. On a typical day, Jacobi generally works between ten and twelve hours. His work schedule starts around 7:30 a.m. and finishes at approximately 6:30 p.m. in the evening, breaking only for lunch in mid-afternoon at a restaurant within walking distance of his home lovingly referred to as “The Diner.” Jacobi works six days a week, Monday through Saturday and reserves Sunday as his time of rest and relaxation. However, on occasion, Jacobi will allot some time on Sunday for repair depending on customer requests.

Since Mark is technically a sole proprietor, it is imperative that he keep accurate records for federal and state tax purposes. Officially, Jacobi's business is called "AJ Clarinets."⁴⁸ Mark Jacobi accepts both cash and checks from his customers. Payment is usually due at the time the services are rendered. In the event that a clarinet is mailed to him for repair, Jacobi allows payment after the return of the instrument to the customer.⁴⁹

Although repairing clarinets is Mark's ultimate passion and life's work, which he would gladly do for free if possible, he must still charge customers in order to make a living. Since each customer has an array of potential repair possibilities, Jacobi must consider many factors when pricing out each specific repair. These factors include the length of time spent on a particular repair, the types and quantity of materials used, and any special demands from customers. For any repair job needing more than a full day of work, Jacobi will pro-rate his time according to the number of hours he puts in on a repair job.⁵⁰ However, Jacobi understands that his output on any particular day will vary based on the type of repair he is doing, his level of concentration, and his wellbeing. Accordingly, he will adjust his prices slightly based on these factors.

For instance, during the three-day interview process for this project, Jacobi spent several hours each day working on a clarinet from the former principal clarinetist of the Fort Worth Symphony, Andy Crisanti. The clarinet needed what is called a "plateau system," a custom addition to the key-work of the instrument allowing one or more ring-keys to move independently from their usual or otherwise attached counterparts. This was requested because the clarinetist was having difficulty maintaining a seal with his right-hand index finger while playing the instrument. Consequently, the ring-key controlled by the index finger of the right

⁴⁸ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁴⁹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁵⁰ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

hand needed to be filled in permanently with a bladder pad similar to the key-work system of a saxophone. Jacobi had been working on the clarinet for at least two weeks prior to the interview for this monograph.

Since this “plateau system” addition was a completely original design by Jacobi, it was imperative that every measurement, cut, and solder be as accurate as possible. The figure below contains a photo of the nearly completed “plateau system.” Taking notice of the narrow strip of metal along the right side (top of the photo) of the instrument, two holes were drilled to house adjustment screws. These adjustment screws were necessary to properly regulate the movement of each section of the “plateau system” allowing them to work in tandem with one another.

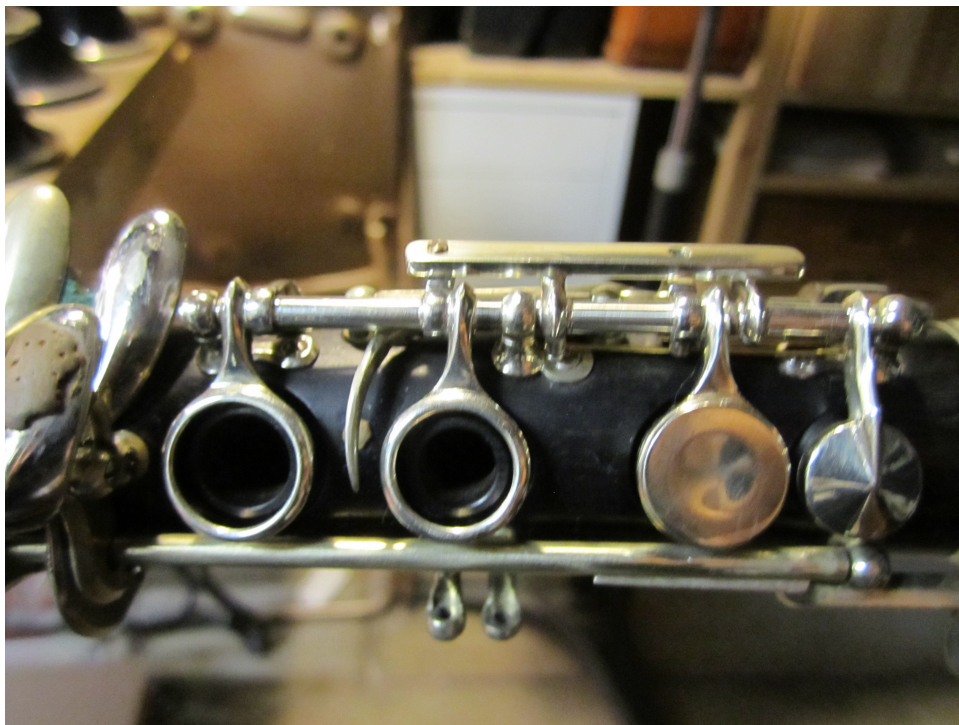


Figure 7: Photo of “Plateau System” Custom Addition

Just as Jacobi finished tightening the last adjustment screw, he realized that the contact point (the point where the screw meets the key mechanism) was less than 2 millimeters off-center. Although the mechanism as a whole functioned flawlessly even with the minor defect, Jacobi was not satisfied with the placement of this particular aspect. After contemplating several

troubleshooting ideas, he finally realized that centering the screw was the only acceptable option saying, "...it's not perfect. I have to re-drill it..." He further explained that although the mechanism worked properly, use of the mechanism over time with an off-centered screw would eventually create unnecessary wear on the contact point, promoting the key to rotate off its center axis point.⁵¹

In keeping with his perfectionist nature, Jacobi disassembled the entire mechanism in order to fix the defect. The problem hole was then filled with melted soldering metal, filed down, polished, and finally re-drilled 2 millimeters in the "correct" direction. Once re-assembled, the screw was accurately centered and Jacobi was finally pleased with the finished product.

3.4 The Quality of Mark Jacobi's Work

The work of Mark Jacobi always exceeds the expectations of his clients. His work is thoughtful and methodic. Unlike a lot of repairman in the United States, Jacobi uses more than just his sense of sight to know that a repair underway is being preformed properly. Using his sense of touch, he is constantly rubbing materials against his skin to evaluate texture and firmness. For tone-hole pads, Jacobi rubs his fingers over the surface of each pad to test for smoothness and evenness of texture. A pad evaluated to be "rough" or "sticky" will be immediately rejected for another more closely meeting Jacobi's strict quality standards. While in the process of adjusting spring tension or key placement, Jacobi often puts the section up to his ears to listen for correct mechanism movement. In doing so, he is listening for a glimpse of metal-on-metal contact. Once coupled with Jacobi's other participating senses, his impeccable ear for sound gives Jacobi the ability to achieve a result where others would fall short. Gregory Raden of the Dallas Symphony remarks:

⁵¹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

What also makes Mark's work truly special is that he has a fantastic ear for sound. He is quite a good clarinetist as well having studied with Mike Guerra, Anthony Gigliotti, and of course being around some of the great players in his shop for many years. Harold Wright was a favorite of his as well as Donald Montanaro who has worked with Mark at great length on many of his instruments -voicing them to find the perfect combination of resonance, center, and correct intonation on each note.⁵² [sic]

For Jacobi, the repair is not done until he is completely satisfied with the result he has just produced. Even seemingly basic repairs are given the same level of commitment as any other more difficult repair. The amount of time spent on any one particular repair never seems to be sacrificed for any reason. Mark Nuccio of the New York Philharmonic remarks on Jacobi's time commitment to his customers:

One time I had a register key that tended to stick when I tried to release the key. I took it to Mark and after he custom made [sic] a pad for it, he inserted it in the key. It looked great and felt quite good but he was not happy and would not let that instrument out of his sight until it was perfect. ONE HOUR LATER [sic] and some very focused work, he was finally pleased and was able to move onto something else. Most repairman would do that, for better or for worse, in 2 or 3 minutes. Mark was focused on perfection!⁵³

3.5 Observations of Customers

Over the span of a forty-year career, Mark Jacobi has earned the trust, admiration and recommendations of some of the finest clarinet players from around the world. Jacobi's client list includes many prominent clarinetists such as Deborah Chodacki- Louisiana State University, Samuel Caviezel- Philadelphia Orchestra, Gergory Raden- Dallas Symphony Orchestra, Mark Nuccio- New York Philharmonic and Richard "Richie" Hawley- Rice University. Their love and appreciation for his work is nearly indescribable and has promoted Jacobi to the status of "living legend" in the clarinet community.

⁵² Gregory Raden. Questionnaire by John Coppa, Dallas, TX, August 28, 2014.

⁵³ Mark Nuccio. Questionnaire by John Coppa, New York, NY, September 7, 2014.

3.6 Observations of Sam Caviezel

Samuel Caviezel, associate principal clarinet and Eb clarinet of the Philadelphia Orchestra, has been a customer of Mark Jacobi since 1992 when he was a student at the Curtis Institute of Music.⁵⁴ He notes, “If you go to school in Philadelphia and study clarinet, it’s hard not to know Mark Jacobi.”⁵⁵ Over a span of twenty-two years knowing and working with Jacobi, Caviezel acknowledges that the two have become close friends in addition to becoming close professional colleagues. Jacobi’s work has helped to grow Caviezel as a musician, amplifying his ability to make more of what he wants to happen on the clarinet.

Like nearly all of Jacobi’s customers, Caviezel has incredible regard for Jacobi’s work. During his interview for this monograph, Caviezel stated:

He's meticulous! He's meticulous and he does beautiful-looking work as well as beautiful (-functioning) work. You'll never say that Mark Jacobi is sloppy about anything. It's the best I've ever experienced.⁵⁶

Caviezel continued by explaining that the English language lacks a word that fully captures the type of work that Jacobi does for the instrument. He reiterates that other languages, such as French, have a word for this type of work:

There's no word in the English language for what Mark is. You call it different things. You call him an artist. You call him a craftsman. You call him a repairman. You call him ... What he is... is a *Luthier*... He loves the instruments. He understands the acoustics of the instruments and what makes the instruments great. He gets the instruments to work at their very highest level...to get the instruments into peak shape.⁵⁷

Mark Jacobi is as skilled on repairing the instrument as he is in connecting with the ideals of each individual customer. Caviezel explains that Jacobi has the incredible ability to react and adjust to the preferences of each player:

⁵⁴ Sam Caviezel. Interview by John Coppa, Baton Rouge, LA, August 4, 2014.

⁵⁵ Sam Caviezel. Interview by John Coppa, Baton Rouge, LA, August 4, 2014.

⁵⁶ Sam Caviezel. Interview by John Coppa, Baton Rouge, LA, August 4, 2014.

⁵⁷ Sam Caviezel. Interview by John Coppa, Baton Rouge, LA, August 4, 2014.

We both have the same philosophical end goal as far as how the instrument should be sounding. I don't know if other repairmen would understand what I was looking for and know how to do it. Where as, Mark knows exactly what I'm looking for and knows exactly how to do it.⁵⁸

This ability to understand the instrument is what truly makes Jacobi's work remarkable. He seemingly has the skill to know intuitively what a customer wants and how to actually achieve it. Because of his dedication to the advancement of the possibilities of the instrument, Jacobi has essentially become the "Hans Moennig" for the next generation of clarinetists. Caviezel shares these sentiments, saying:

He (Hans Moennig) was the spiritual father of a lot of the repairmen these days for different instruments. It goes from Moennig to Mark. Mark picked up where Moennig left off with the clarinet.⁵⁹

3.7 Observations of Deborah Chodacki

Another customer of Mark Jacobi is Deborah Chodacki, Associate Professor of Clarinet at Louisiana State University. Prior to first meeting Jacobi in 2000, Chodacki had all of her clarinet needs tended to by Dominic Puccio of Rochester, NY.⁶⁰ Puccio also produced a very superior product and once she discovered Jacobi's work, she was relieved to know that she could continue expecting high-level clarinet repair following Puccio's retirement.⁶¹

Similar to the views and opinions shared of her colleagues, Chodacki believes that the players Mark Jacobi works with have enhanced the quality of his work. In an interview for this project, Chodacki says:

Players seek out Mark Jacobi because he knows how the instrument works: from the bore, tone hole placement and shape, out to the key-work and pads. He is dedicated to the instrument sounding resonant, clear, and as in tune as is possible for each individual clarinet. Mark has such excellent ears and a beautiful concept of sound and he is hearing,

⁵⁸ Sam Caviezel. Interview by John Coppa, Baton Rouge, LA, August 4, 2014.

⁵⁹ Sam Caviezel. Interview by John Coppa, Baton Rouge, LA, August 4, 2014.

⁶⁰ Chodacki, Deborah. Interview by John Coppa, Baton Rouge, LA, June 20, 2014.

⁶¹ Deborah Chodacki. Interview by John Coppa, Baton Rouge, LA, June 20, 2014.

in his shop, some of the most wonderful clarinet players in the world. When Mark is finished the instrument will be playing at its best, and then, be tended to for any individual preferences, whether it be spring tensions, key height and angle or special modifications.

⁶²

Chodacki also credits Jacobi's popularity to his ever-growing creative nature and curiosity. In her opinion, the biggest factor contributing to Jacobi's expertise is his balance between preserving original Buffet clarinet design and enhancing the instrument through the use of new materials. His intimate knowledge of clarinet design guides the decisions he makes while repairing a clarinet for a specific person. Chodacki continues these sentiments, stating:

I could see him as someone also who realizes that the golden age of the Buffet clarinets and the Selmer clarinets is no longer. That as the factory is taking over so much more, that there is this variation of quality even in different keys. He's always on the lookout of [*sic*] how he can help that unique clarinet and that individual that attaches to it, to have the very best adjustment. I think there's like, this is the way we do it, this is the tradition we do it, now the job's done.⁶³

The job's not done for Mark until it absolutely fits that player well or it suits him well. If it's way outside of the boundaries of what it should be, maybe by former Buffet standards, he'll pull it back to where it fits those standards. I see him as a guardian of the greatest qualities of the instrument I play and wanting to keep those and then always exploring, other, newer materials that hold up really well for the long route that will serve the player as well are better than skin pads, cork pads, etc. It's just the great example of his obsessive attention to detail (that) makes my life just so much easier.⁶⁴

Continuing with Jacobi's use of material, Chodacki makes an interesting comparison between the work currently being done by Jacobi and the work previously done by Hans Moennig, saying:

When Moennig worked on my clarinets, many many years ago, I watched him, two days in a row, twelve hours a day, work with pads, cork, and settings. He might make as many as four cork pads by hand, throwing each away as he became dissatisfied with some blemish or imperfection in the cork. He would spend a great amount of time floating a pad into the key cup and adjusting its seating...then, take it out, throw it away and begin

⁶² Deborah Chodacki. Interview by John Coppa, Baton Rouge, LA, June 20, 2014.

⁶³ Deborah Chodacki. Interview by John Coppa, Baton Rouge, LA, June 20, 2014.

⁶⁴ Deborah Chodacki. Interview by John Coppa, Baton Rouge, LA, June 20, 2014.

again. Mark Jacobi is every bit as demanding about materials and seatings. He is incredible sensitive to every aspect of quality.⁶⁵

Before he glued he dropped the shellac and melted it to load the key-cup in so that there would only be a certain amount of shellac but more of that space was stacked with something firm. This hard cardboard-like, little square he drops in there. I think that Mark is also very sensitive to how much shellac or glue goes in there, what kind it is, so how much float [sic] there is that the pad is adhering to. How deep in the cup is it mounted? You can look at some terribly messy jobs (from other repairmen) where you see people have used just way too much shellac or glue.⁶⁶

3.8 Conclusion

Over the many years Jacobi has been practicing his craft, he has both learned and developed from his many interactions with professional clarinetists from around the world. Although very much rooted in the traditions of his predecessors, Jacobi is open to new contemporary ideas that put his work far above the industry standard. Many customers, including Chodacki, have experienced this experimentation first-hand.

The quality of work that Mark Jacobi produces is markedly superior to the normal standard among clarinet repair technicians. He continues to innovate and improve repair techniques while still preserving the traditions of the past set forth by craftsmen like Hans Moennig. The quality of repair work he does for professional clarinetists has become an invaluable resource.

⁶⁵ Deborah Chodacki. Interview by John Coppa, Baton Rouge, LA, June 20, 2014.

⁶⁶ Deborah Chodacki. Interview by John Coppa, Baton Rouge, LA, June 20, 2014.

CHAPTER 4: MARK JACOBI'S APPROACH TO TEACHING AN APPRENTICE

4.1 Introduction

Starting in the early 1990s, Mark Jacobi began accepting apprentices to train with him. He has accepted only four major apprentices to study with him and learn his particular style of repairing clarinets. In addition to these apprentices, Mark Jacobi has given classes and private lessons on clarinet repair to countless students in the Philadelphia area as part of a joint collaboration between institutions such as Temple University and the Curtis Institute of Music. Jacobi's major apprentices include Sarah Bresnahan, Beverly Hawkins, Vincent Marinelli and, most recently, Melanie Wong. Although Jacobi has only had four apprentices over the past two decades, he admits that he is not particularly selective about training a new student. One of his only requirements prior to studying with him is that a potential student must have a passion for the craft of repairing clarinets and be willing to "put the time into learning the trade."⁶⁷

Mark Jacobi likes to be extremely involved in his student's learning during the early phases of the apprenticeship. Typically, his students have weekly sessions. Since Jacobi usually dedicates an entire day to each training session, he charges his apprentice for a full day of repairing clarinets for customers. The actual price for each apprentice varies based on individual needs and is discussed prior to starting the apprenticeship. Once the student is proficient enough to practice repairing without constant supervision Jacobi is able to charge a lower rate or no rate at all, anticipating that he will be able to work on other repair projects while an apprentice is training in his workshop. According to his apprentice Melanie Wong, "Once I was able to show

⁶⁷ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

up and work on my own projects he didn't charge me anymore and he could work on other things.”⁶⁸

4.2 Steps to Training an Apprentice

Although Mark Jacobi does not follow a prescribed model for training each apprentice, he does follow a general guideline or order to introducing the topics of repair. According to Jacobi, some aspects of his guideline can be modified, accelerated, examined further, or omitted depending on the level of skill an apprentice has before training commences.⁶⁹ The following is a list of steps that Jacobi follows when training a new apprentice:

1.) Learning to Use Different Types of Screwdrivers

Screwdrivers are one of the most important pieces of equipment for any clarinet or woodwind repairperson. Since the primary purpose of using screwdrivers is to assemble and disassemble the various components the instrument, an apprentice must become quick and proficient at using them. In a business in which the less time spent working equals more money earned, a repairperson must have a mastery of this concept. Jacobi says that a good repairperson can fully disassemble and reassemble a clarinet in less than 10 minutes.⁷⁰

2.) Fabricating a Woodblock for Organizing Screws

Early in the process of training a new apprentice, Mark Jacobi has each person make a woodblock outfitted with small holes that is to be used for storing any screw, rod or other small component removed from the clarinet. The block is drilled with small holes which are used hold the various rods and screws of the clarinet. The holes in the block are sometimes labeled with either the name of each part (in less intricate versions) or with a small drawing of the clarinet

⁶⁸ Wong, Melanie. Interview by John Coppa, June 4, 2014.

⁶⁹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁷⁰ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

section from which the part was taken (in more elaborate versions). Multiple woodblocks can be made for working on several clarinets simultaneously. Also during this training step, Jacobi has his apprentices learn the names of each piece of the key-work. This is imperative for understanding the layout of the clarinet and the physical relationships between different keys.⁷¹

3.) Learning and Understanding How to Manipulate Springs (Flat and Needle)

All keys on the clarinet are controlled and operated in some way by either flat or needle springs. Learning to set the correct tension for each spring is crucial to a key's proper function. The four right-hand side keys, the register key and the 'A' key are all operated by flat springs. Since these keys are closed while not in use, the springs must be bent properly to facilitate both a tight seal against each tone hole and have a smooth action once they are pressed.

As Jacobi is known for his exacting preferences on spring tension. His apprentices are expected to know the proper tolerance for each spring. They are also taught the procedure for removing and replacing springs.⁷²

4.) Learning the Art of Key Fitting or "Swedging"

Constant movement of the key work along with environmental changes can cause the contact points between keys and posts to shift. This shift causes keys to rotate or rock off of their center fulcrum, creating excess key motion and, in some cases, noise.⁷³ This shifting movement can also cause pads to close improperly. It adversely affects pad seating because the relationship between the position of the pad and the tone hole is different with each activation. To correct the affected key, a pair of "swedging" pliers is required. The pliers are designed to extend or expand the metal on each side of the key to fit more precisely the distance between posts. Jacobi

⁷¹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁷² Melanie Wong. Interview by John Coppa, June 4, 2014.

⁷³ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

suggests that the key rod should be inserted into the key while using the pliers. Without the rod in place, the pliers are likely to crush the key as attempts are made to expand the metal.⁷⁴

5.) Learning to Remove the Register Tube and Thumb ‘F’ Tube

Occasionally, it may be required to change out a register tube or ‘F’ thumb tube per the request of a customer. Jacobi teaches a technique of inserting a metal rod with the same diameter into the register or thumb tube and slowly applying heat to the rod. The heat from the rod is then transferred to the tube thus loosening the glue holding the tube in place on the instrument. Jacobi uses either an oil lamp or electric heater to heat the rod that is inserted into the tube. Since register tube replacement is the most commonly requested service, Jacobi focuses on making sure apprentices are proficient at this repair. Typically, register tubes are replaced with shorter versions to facilitate better response and tone of the left-hand ‘A’ above the staff.

6.) Cleaning and Polishing Keys

Each student of Jacobi is required to learn how to properly clean and polish the metal keys of the instrument. During this step, they also learn to use different polishing compound brands such as “New White,” “Tripoli” brand cleaners, and “Red Rouge.”⁷⁵ In addition, the student will learn to properly use an electric polishing wheel. Learning to apply the correct amount of pressure is crucial as the polishing wheel can actually remove the key finish if exposed for too long.

7.) Cleaning the Body of the Clarinet

Mark Jacobi has a very unique technique for cleaning the wood body of the clarinet and instructs his students to do the same. Over time with frequent usage, a clarinet can become dirty from skin oil, dust, and exposure to condensation. To combat this, Jacobi simply uses common

⁷⁴ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁷⁵ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

soap and water to remove any particulates from the instrument. He first removes all metal keys and then uses a soap product called Howard “Clean-A-Finish” to wash the instrument. Because the wood of the clarinet is treated and sealed from the factory, the soap and water will not absorb into wood. After cleaning, bore oil can be applied to the wood but is not absolutely essential.

After step seven of the training process, Jacobi has his students repeat steps one through seven to insure a complete mastery over the techniques he outlines. The amount of time needed to achieve this is completely dependent on each individual apprentice’s personality, their skill level, and their schedule, according to Jacobi.⁷⁶ However, he notes that most of his pupils have taken between four to six weeks to reach this stage, assuming an overall timeframe for the apprenticeship of two years.⁷⁷

Once Mark Jacobi feels that his student has mastered steps 1 through 7, the student continues with the next set of basic repair and maintenance techniques:

8.) Learning to Oil or Re-oil the Body of the Instrument

Applying oil to the body of the clarinet insures that the wood will regulate moisture and helps prevent it from drying out and cracking.⁷⁸ In this step, Jacobi shows his students which substances are best for oiling wood clarinets. There are two different types of oil that Jacobi recommends for this process:

- 1.) Pharmaceutical grade almond oil mixed with paraffin oil. Jacobi mixes equal parts Almond and Paraffin oil, sometimes adding an additional 10% of sweet-orange oil.
- 2.) Sweet Almond oil mixed with 30% alcohol. (Technique learned during his time apprenticing at the Buffet Crampon factory)

⁷⁶ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁷⁷ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁷⁸ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

Interestingly, the Buffet Company does not recommend oiling their clarinets after they leave the factory. Generally, Jacobi agrees with Buffet on this issue, however there are instances where he believes differently. Should a clarinet need oiling, he recommends letting the oil soak into the wood overnight and even applying the oil to the inside of the bore.⁷⁹ Jacobi also notes that keeping a clarinet humidified will ensure that it will not need frequent oil treatments.

9.) Learning to Replace Joint or Tenon Corks

Cork placed around the upper and lower portions of each joint is an essential part of sealing the clarinet, and knowing how to replace this is fundamental for any repairman. Jacobi first teaches his apprentices how to properly remove the old or damaged tenon cork using a cork scraper.⁸⁰ Jacobi notes that it is important to remove only the cork and avoid damaging the “cork track,” the small indentations built into the wood that help hold the tenon cork in place.⁸¹ Jacobi also educates his apprentice on the type and quality of materials needed for the job. It is essential that the pieces of cork chosen for this be free of knots and have a flat smooth surface. This will ensure an airtight seal between each joint. Next, Jacobi teaches the process of measuring the cork by resting it against the “cork track” and using a razorblade to cut the dimensions into it. Once measured and cut, contact cement is applied to the cork and “cork track.” Once completely dry, the cork is then wrapped around the tenon. Sandpaper is used to smooth out and taper the cork down to meet the edge of the wood. Occasionally, the center of the cork is beveled to ensure a tight fit and prevent rocking of the joints from side to side.

10.) Learning to Apply Key Cork on the Instrument

⁷⁹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁸⁰ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

⁸¹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

Certain keys on the clarinet require the use of cork to regulate their height and muffle key noise. Jacobi has his students practice cutting and shaping these pieces of cork over a period of several days. The use of razorblades or sharp utility knife is required to cut the cork and takes a certain degree of proficiency to master these techniques.

11.) Learning to Repair Tone Holes

Occasionally, as a clarinet ages or becomes damaged, the surface of tone holes may need to be resurfaced. Notches or groves on the tone hole surfaces will prevent pads from completely sealing. Cyanoacrylate glue, also known as super glue, is used to fill in damaged areas of the tone hole. After the glue has dried, Jacobi instructs his students to use metal files and sandpaper to then shape the tone hole surface. Once properly shaped, Jacobi uses paraffin wax to seal the contact point between the cyanoacrylate glue and wood and advises his students to do the same.

12.) Learning to Fabricate Key Rods

Certain keys on the clarinet are held in place and rotate on a metal rod. Fitting between two posts, this rod usually passes through one and screws tightly into the other. Since these rods are unique to each key on each different clarinet, it is important for a repair technician to know how to fabricate these from scratch.

13.) Final Fitting of Clarinet Keys

The final fitting of the keys is a crucial step of the training process. Apprentices are taught to properly align each key between its designated posts. Each key must fit with exacting precision so as not to rock back and forth or side to side. This step also includes learning to adjust keys that have a dual activation (meaning that one key operates two tone holes simultaneously). For instance, the left-hand 'A' key must not only activate its own pad, but also must activate pad of the G sharp key situated above it. The springs for these two keys must be

adjusted to allow proper tension for the G sharp when used independently while still allowing the ‘A’ key to function properly. Another example of dual activation occurs with the pinky keys of both the right and left hands. Each left hand pinky key has a right hand counterpart that must activate the same tone hole in exactly the same way. Properly regulating these keys is necessary to facilitate proper function of the key-work.

14.) Fitting Pads

Pads are an essential part of the clarinet and the only device used to actually seal the tone holes of the instrument. Since pads come in a variety of materials such as fish skin, foam, leather and cork, a skilled repairman must know how to work with all of them. Jacobi teaches each apprentice about the different materials that pads are made from and where each works most effectively on the instrument. Pads have several jobs while in use on the clarinet. Primarily, they must create an airtight seal against each tone hole in order for the instrument to work properly. Further, they must allow the air to escape from each tone hole without generating any unwanted noise such as ‘buzzing or fuzziness.’⁸² After the pad selection process has been explained, Jacobi shows his student the method for accurately placing pads between the key-cup and tone hole called “floating.” “Floating” involves using the slightly melted glue behind the pad in order to allow it to be moved or turned slightly as the key is gently pressed or activated several times. This process, when learned correctly, allows the repairman to bring the top of the pad in exact alignment with the tone hole, creating an airtight seal. To check for proper contact, cigarette paper is placed at the contact point between the pad and tone hole and pulled to check for friction. If the paper is removed without any friction, the pad has been installed incorrectly and must be adjusted.

⁸² Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

15.) Adjusting Key Heights and Balancing Key Springs

Because each clarinet is different, the height of each key will affect the sound and tuning of each instrument in several ways. Jacobi teaches his students the technique of bending keys to either create more or less space between the key and tone hole. Keys adjusted too close to the tone hole could cause the corresponding note(s) to become “stuffy” or flat in pitch. Keys adjusted too far from the tone holes could result in excess motion for the player, reducing optimal facilitation for the fingers.

16.) Adjusting the Left Hand Levers and Bridge Key

The final basic repair technique to learn is the proper adjustment of the lower left hand pinky levers and the bridge key. Since these levers also each correspond to a right hand pinky key, the movement of the two must match each other perfectly. While this aspect is first addressed in step thirteen, it is explored again in more depth to ensure complete mastery. When the adjustment is correct, both the right hand key and left hand lever will move the same key an equal distance to and from their corresponding tone hole. Jacobi teaches the techniques needed to bend each key using a tool called a “pad slick,” a small, flat piece of metal used to hold a key in place at one end while it is being bent at the other.

Steps one through sixteen are the absolute basic techniques that an apprentice must master before moving forward to more advanced techniques, according to Jacobi. Through learning and practicing these techniques, Jacobi teaches his students how to use all of the necessary heavy machinery involved in repairing clarinets including a drill press, wood lathe, and welding/soldering equipment. They also develop skills for analyzing and assessing instruments by simply observing their own work.⁸³

⁸³ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

4.3 The Apprentice Experience of Melanie Wong

Apprenticing with Mark Jacobi is a life-changing experience that very few people have had the privilege of having. Because Jacobi doesn't follow a prescribed method, some of his apprentices have had very different training experiences.

Melanie Wong is an exception to Jacobi's usual prerequisite. Normally, Jacobi requires students to acquire actual training from a woodwind repair school before studying with him. Attending New York University for her undergraduate degree, Wong studied clarinet performance with both Larry Guy and Esther Lamneck. After graduating from NYU, Wong attended Arizona State University for her Masters Degree and developed an appreciation for clarinet repair.⁸⁴ Her clarinet instructor at ASU, Dr. Robert Spring, encouraged her to pursue this since she had such a strong proclivity for the field. Together they researched several possible repairmen with whom to apprentice. After contacting most of them, Wong quickly learned that an apprenticeship without first learning the basic skills provided by training from repair school was not typical. Mark Jacobi was the only person who would even consider the idea of accepting an apprentice in repair who had not attended repair school, but even he was extremely hesitant. Jacobi did not have an apprentice at this time but needed some time to assess whether or not he wanted to teach someone without any form of repair training. Eventually, Jacobi allowed Wong to study with him. In an interview with Wong, she noted the difficult process of getting to study with Jacobi:

I first made a list of all the big name repair people with my teacher (Robert Spring). Mark's name came up so I called him and asked to study with him. He didn't have an apprentice at the time, but needed time to think about it. (Mark Jacobi) got back to me and pushed me to go to (repair) school before working with him... I told him that I didn't

⁸⁴ Melanie Wong. Interview by John Coppa, June 4, 2014.

really want to go to repair school, but he let me study with him anyway... I polished keys for a month before I actually worked on a clarinet...⁸⁵

For Wong, the training process was in a format to which she was accustomed from her experience with taking private clarinet lessons. In July of 2012 she started her apprenticeship, visiting Jacobi once a week. This cost included an all day session and Jacobi's undivided attention for the entire training session. After several months, Wong was visiting Jacobi twice a week. However Jacobi did not charge her any extra for the additional day of training. By January of 2013, Wong was proficient enough to pursue repair projects on her own with minimal supervision and Jacobi stopped charging her all together.⁸⁶

As Wong became increasingly more self-sufficient, she not only began taking on repair projects of her own, but also helped Jacobi with his workload. Wong progressed quickly through the training process and was eventually hired by the Buffet Group USA in late 2013 to repair clarinets for their New York City showroom located in Manhattan. Despite having full-time employment working in the repair industry, she still visits Jacobi once a week for guidance and mentorship. Melanie Wong now practices the skills of a tradition passed on to her by Mark Jacobi and, in doing so, joins a long line of highly specialized craftsmen.

4.4 Assessing Instrument Condition and The G-Sharp Key

Mark Jacobi also teaches his apprentices to accurately assess the overall condition of any particular clarinet and make quick determinations as to what repairs need to be done. He also focuses on one particular assessment of the instrument and asks that his apprentices do the same. This particular assessment is made on the G-sharp key, located on the left side of the instrument and used by the left hand index finger. Customers of Jacobi have noticed throughout

⁸⁵ Melanie Wong. Interview by John Coppa, June 4, 2014.

⁸⁶ Melanie Wong. Interview by John Coppa, June 4, 2014.

the years that this assessment has become an almost unwavering obsession. Deborah Chodacki noticed this obsession with the G-sharp key during one interesting repair session with Jacobi:

My colleague Sam (Caviezel) and I have often joked about the G# key and Mark. "Don't let him near the G3 key or you will be there another five hours!" Mark worked extensively on this key on one of my clarinets even though I was preoccupied by other problems on the horn. The key-pad had been leaking, it was opening too far, it was too weak in spring tension. When I played the horn everything was much more even and 'liquid' feeling. The intonation was more even, particularly through the throat register. I'm so glad Mark is so meticulous about these things as it makes the instrument so much easier to play and helps to raise the quality of my playing.⁸⁷

This experience that Deborah Chodacki had with Mark Jacobi regarding the G-sharp key further exemplifies the meticulous nature with which Jacobi practices his craft. This quest for perfection is evident across every facet of his work and this concept of being meticulous and precise is something he attempts to instill in all of his apprentices.

In the end, Chodacki achieved a result that she almost didn't even know she was seeking. It was a result that ended up being better than any result she could have imagined. The work also attests to Jacobi's ability to fix problems with the instrument that are produced directly from the manufacturer. This quality and attention to detail is something Jacobi attempts to imprint on each of his apprentices.

4.5 Conclusion

Through the apprentice process, Mark Jacobi is training the next generation of instrument repair craftsmen. Having a system of training steps has allowed Jacobi to guide his apprentices toward a path of meticulous and precision based craftsmanship. The passion and dedication that Jacobi has for his craft is represented well in the work of his apprentices and will guide the training of the future generations of great repair technicians.

⁸⁷ Deborah Chodacki. Interview by John Coppa, Baton Rouge, LA, June 20, 2014.

CHAPTER 5: THE CLARINET BARREL AND THE HANS MOENNIG DESIGN

5.1 Brief history of the Clarinet Barrel

Modern clarinets have a section called the barrel or socket joint. This piece is placed between the mouthpiece and upper joint of the clarinet by tightly fitting over tenons for the mouthpiece and upper joint. These tenons are extensions of each of these pieces with a ring of cork attached for a tight seal with the barrel (see image below of a clarinet tenon). The barrel is an essential part of the clarinet to ensure it plays at the correct pitch and also to facilitate proper tuning. In this capacity, it serves as an extension of the mouthpiece to lengthen the instrument.⁸⁸ To adjust the pitch of the instrument, the barrel can be moved slightly along the tenon of the upper joint, elongating the instrument as a whole and effectively functioning as a tuning device. As it is adjusted away from the upper joint, the length of the instrument is expanded and the pitch is flattened. Conversely, as the barrel is adjusted toward the upper joint, the length is shortened and the pitch rises.



Figure 8: Example of Upper Joint Tenon on Bb Clarinet

⁸⁸ Brymer, Jack, *Clarinet* (New York, New York: Schirmer Books: A Division of Macmillan Publishing Company Inc., 1976).

Until the development of the barrel section, mouthpieces were generally designed with long extensions that directly connected to a tenon on the upper joint of the clarinet.⁸⁹ Below is a sketch from *The Clarinet in the Classical Period* by Albert Rice of an extended mouthpiece. Essentially these mouthpieces with long extensions served the dual purpose of both a mouthpiece and a connective structure or barrel.

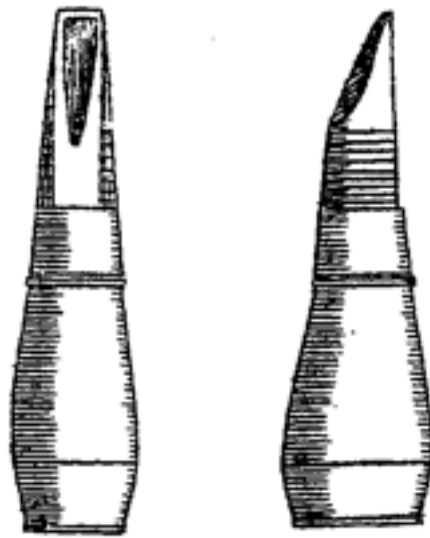


Figure 9: Sketch of Mouthpiece-barrel combination from 1777: *The Clarinet in the Classical Period* by Albert Rice, p. 16⁹⁰

During the early 1770s, French and German instrument makers began shortening the mouthpieces and introducing an independent barrel section. This resulted in the two uniquely shaped sections offering greater potential for fine-tuning pitch on each instrument.⁹¹ The addition of the barrel section required that a tenon, similar to the tenon shown previously, be added to the bottom end of each mouthpiece for a successful and airtight connection.

Slightly later, ca. 1785, English clarinet makers also separated the mouthpiece and barrel into two sections. The results in this geographic area, however, were very different from those on

⁸⁹ Albert R. Rice.

⁹⁰ Albert R. Rice.

⁹¹ Albert R. Rice.

the European continent. While the German and French models generally made their mouthpiece and barrel combinations the same length or longer than the earlier extended mouthpiece design, English style mouthpiece-barrel combinations were shorter than the preexisting styles.⁹² These English versions also allowed for a greater range in tuning than their continental counterparts.⁹³ By starting with a sharper instrument overall, the barrel section offered a greater flexibility to manipulate the clarinet's overall pitch.

5.2 Benefits to Instrument Makers

The division of the mouthpiece and barrel by instrument makers may have also been driven by economic need. By developing two smaller sections, instrument makers could find smaller pieces of wood from which to create the sections. This was an economically savvy way to use cheaper, more available pieces rather than using precious resources on the more expensive long pieces of wood for these sections.⁹⁴

Another advantage to instrument makers of separating the sections was that now different materials could be used to form the mouthpiece and barrel. This meant that smaller pieces of wood, resistant to warping such as blackwood or cocus, could be used for making mouthpieces while continuing to utilize boxwood for the barrel.⁹⁵ Eventually, blackwood became the standard material for milling the entire body of the clarinet, but the separation of the two sections remained. Additionally, instrument makers had now become accustomed to being able to manipulate the inside bore dimensions of the sections independently.

⁹² Albert R. Rice.

⁹³ Albert R. Rice.

⁹⁴ Albert R. Rice.

⁹⁵ Hoeprich, Eric, *The Clarinet* (New Haven, Connecticut: Yale University Press, 2008).

5.3 Tuning Issues and Solutions

Originally, the theory was to have many different barrels of varying lengths in order to change the fundamental key of the instrument. This idea was ultimately abandoned because a clarinet can only be built and played effectively at the pitch for which it has been constructed.⁹⁶ Using barrels of different lengths often worsened intonation throughout the entire instrument and created more tuning issues than a clarinet actually keyed for the intended pitch application. However, the new barrel section did allow players to more permanently change the tuning of their specific instrument, though not its fundamental key. For example, a player wanting to flatten his instrument can employ a longer barrel while a player wanting to sharpen their instrument would employ a shorter barrel.

5.4 General Barrel Bore Size

Barrels for the clarinet come in a variety of shapes, lengths and materials. However, the standard dimensions include a length of 66mm and a straight or conically shaped bore ranging from .565 inches to about .610 inches in diameter.⁹⁷ Generally speaking, a large-bored barrel will sharpen the pitch of the instrument while a small-bored barrel will flatten it. Tuning is also affected by the barrel length.⁹⁸

5.5 Taper and Connection Issues

The connection and contact points of a barrel section are crucial to its proper functioning. Ideally, there should be a smooth connective transition between the bore of the mouthpiece and barrel, and the barrel and upper joint. For instance, if the bottom of a specific mouthpiece measures .587 inches in its bore and the top of the adjoining upper joint measures .583 inches,

⁹⁶ Jack Brymer.

⁹⁷ Pino, David, *The Clarinet and Clarinet Playing* (New York, New York: C. Scribner's Sons, 1983).

⁹⁸ David Pino.

then the barrel should have the same or similar dimensions from top to bottom respectively.⁹⁹ A barrel with these dimensions is known to have a ‘reverse-taper’ bore, meaning that the bore width at the top of the barrel is wider than its bottom. A more traditional configuration includes either a straight bore (same dimensions for top and bottom bore) or a conical bore (narrow top bore to wider bottom bore). The example below displays the shape differences between the two traditional bore configurations used prior to the invention of the ‘reverse-taper.’

Clarinet makers experimented with a ‘reverse-taper’ as a way of lowering the pitch of the upper twelfths of the clarinet upon activation of the register key. Many instrument makers before Hans Moennig had conceptualized the design of this ‘reverse-taper’ barrel. However Moennig is credited with implementing and perfecting the concept.

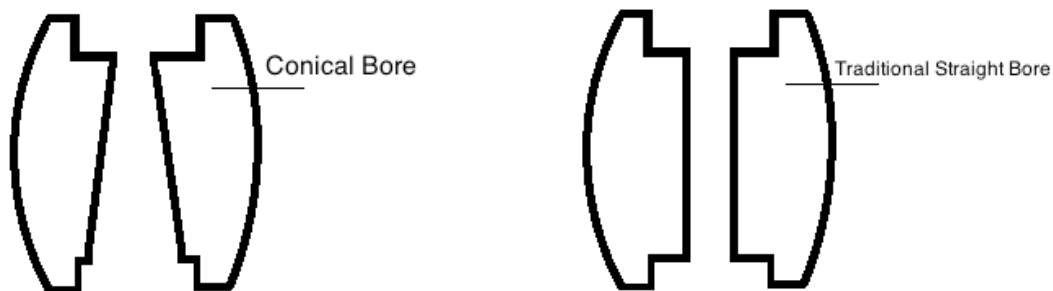


Figure 10: Conical Bore vs. Traditional Straight Bore Design

5.6 The Moennig Barrel

Hans Moennig was not the first to experiment with a ‘reverse taper’ barrel, but was the main contributor to perfecting its dimensions. Originally, the Moennig ‘reverse-taper’ design simply implemented a “V” shape from the top of the bore to the bottom. However, Moennig was curious about how long this “V” shape needed to be in order to accomplish the goal of lowering

⁹⁹ David Pino. (p.83)

the upper twelfths of the instrument. In many instances, he experimented with adding a “choke” to the inside of the barrel. The “choke,” a term coined by Mark Jacobi, is the point inside the bore of the ‘reverse-taper’ barrel at which the taper stops and continues as a straight or slightly conical bore until the connection with the upper joint.¹⁰⁰ The figure below represents the two original versions of the Hans Moennig barrel:

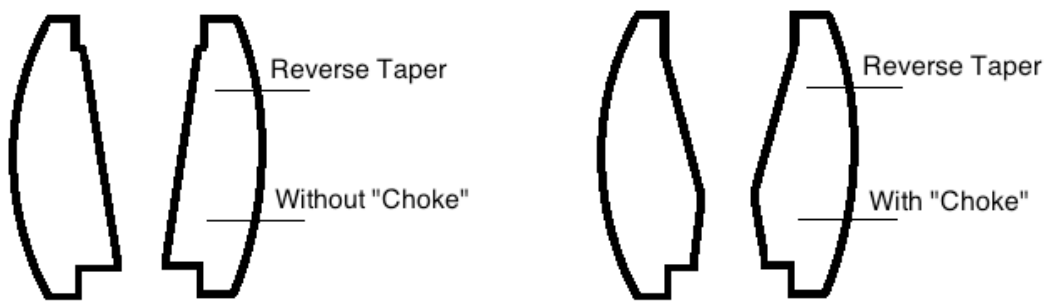


Figure 11: The Two Original Versions of the Moennig ‘Reverse-Taper’ Barrel

Originally, Hans Moennig designed his ‘reverse-taper’ barrel to be used only on the ‘A’ clarinet. As mentioned earlier, the purpose of the barrel was to bring the upper twelfths of the clarinet down in pitch, but also reduced the overall resistant tendencies of the instrument. The pronounced ‘reverse-taper’ bore, in addition to lowering the pitch of the upper partial notes, also works to hold the pitch level consistent for the lower chalumeau register. In addition to changing the original register tube with a short one, the barrel was also purposed to reduce the “grunting” (termed coined by clarinetists to represent the presence a sub-tone) effect of the left-hand ‘A’ above the staff, which can be a nuisance for many clarinet players. It also provides the player with a more focused (enhanced) tone color, according to Jacobi.¹⁰¹ This effectively meant that

¹⁰⁰ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹⁰¹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

the Moennig barrel offered an acoustically balanced tone color; equally representing each vibration on the frequency spectrum as compared with a straight bore design.¹⁰²

Perfecting the ‘reverse-taper’ took time, patience, and the help of professional clarinetists to provide feedback. In a letter to David Weber, Moennig addresses the specific dimensions of his barrel for the ‘A’ clarinet. A copy of the original letter can be found in the appendix of this monograph.

The bore size of the barrels should be 14.75mm (.580 inches) on the mouthpiece side and 14.60mm (.575 inches) on the lower end, which is what I make the bore for the ‘A’ Clarinet. If there is any doubt, (I would) rather leave the bore a little smaller, as I can always make the bore larger..¹⁰³

Originally, Hans Moennig only sought to create a ‘reverse-taper’ barrel for use on the A clarinet. However, once these barrels began to achieve recognition among top clarinetists from around the country, demand for a B-flat version started to take shape.¹⁰⁴ The B-flat version sought to correct the similar issues that the ‘A’ clarinet had such as the “grunting” of the left hand ‘G’, ‘A’, and ‘B’ above the staff and sharpness in pitch in that same register.

Due to the acoustical properties of widening the bore of the barrel, the clarinet as a whole would often become sharp. Moennig would also often widen the bore of the upper joint to match the bottom of his barrel. This would also cause the clarinet to become sharp. To combat this rising of pitch throughout the instrument, Moennig would often apply his ‘reverse-taper’ design to a barrel measuring 67mm in length. This is a slight departure from the standard 66mm barrel used for most professional model Buffet clarinets.

Although standard ‘reverse-taper’ Moennig barrels had fairly standard bore dimensions, Hans Moennig’s process also included customization of each barrel to fit each particular clarinet

¹⁰² Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹⁰³ Moennig, Hans, "Letter to David Weber," (1972).

¹⁰⁴ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

and player.¹⁰⁵ If a clarinetist worked with Moennig personally, there would not be another Moennig barrel with exactly the same bore dimensions as the one created for that player.

Another clarinetist named Ignatius Gennusa, a native of the Philadelphia area, principal clarinet of the Baltimore Symphony, and professor of clarinet at the Peabody Conservatory of Music, worked closely with Hans Moennig to perfect the dimensions of his ‘reverse-taper’ barrel for his specific instrument.¹⁰⁶ The barrel that the two created by way of adjustment and experimentation had 10 specific depths ranging from .590 inches at the very top to .585 inches at the start of the “choke.”

The figure below is a hand drawing from Gennusa on the specifications of his barrel that he believed to be the standard dimensions of a Moening ‘reverse-taper’ barrel.¹⁰⁷ The drawing was made using dimensions taken from Gennusa only and were not necessary confirmed by Hans Moening.¹⁰⁸ The sketch is really a template for the overall general shape of the barrel. Gennusa’s barrel bore dimensions were specific to his clarinet and would not necessarily rectify the same issues (i.e. intonation, tuning, air-resistance, etc.) on another instrument. Notice how the bore tapers slightly just before the “choke” This was typical of a true ‘reverse-taper’ design. Also confirming the ‘reverse-taper’ design is the conical flare just after the “choke” is established.

Gennusa also drew a small musical staff along side the sketch of the barrel with specific pitches corresponding to the area of the bore that represented them. Theoretically, by manipulating a certain area of the bore, one could effectively change the intonation of one pitch with little to no change in any other pitches.

¹⁰⁵ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹⁰⁶ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹⁰⁷ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹⁰⁸ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

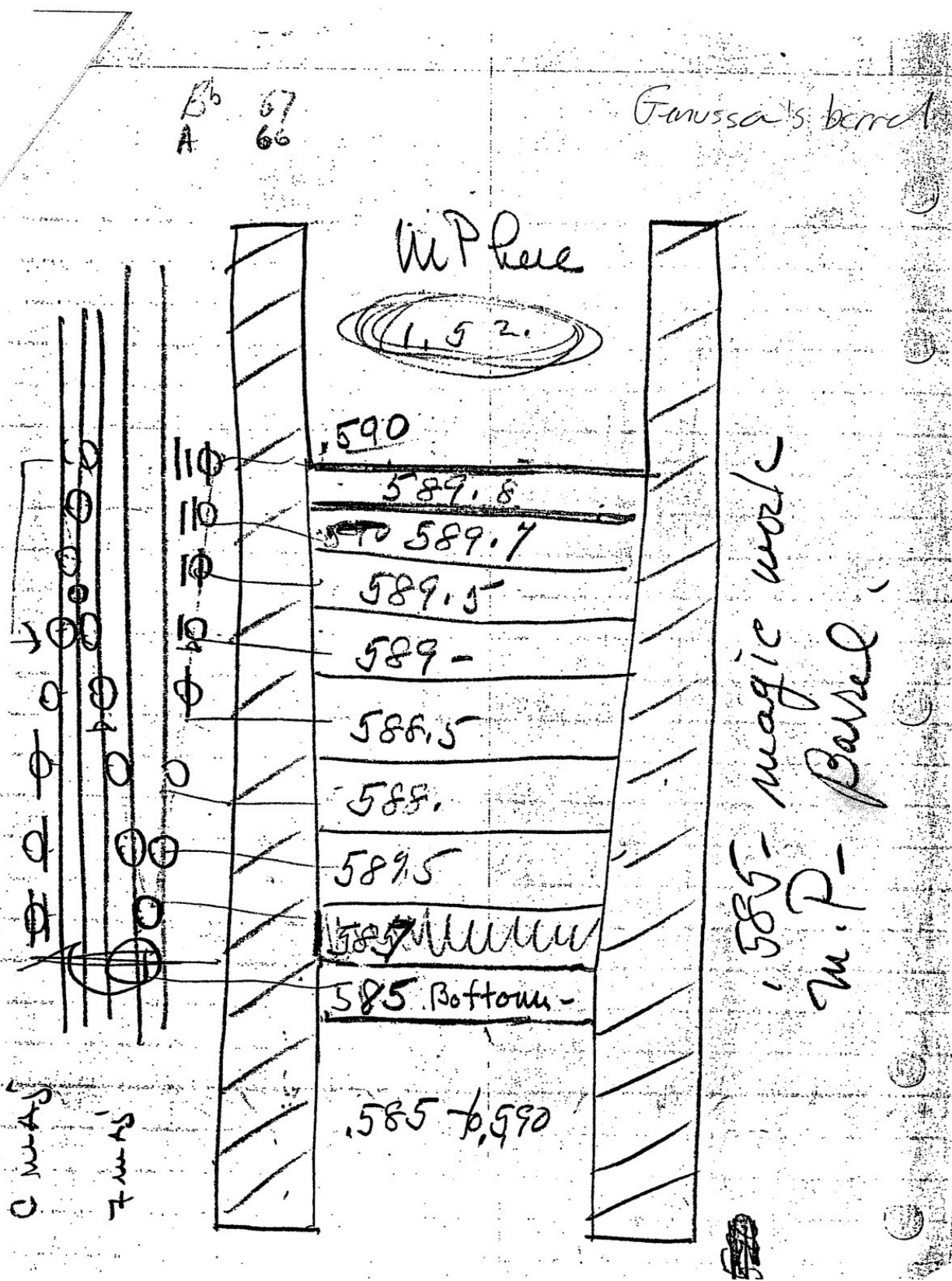


Figure 12: Ignatius Gennusa Barrel Dimensions

While dimensions are an important factor of the ‘reverse-taper’, Jacobi notes that barrels with exactly the same measurements will often play differently.¹⁰⁹ This is due to the subtle differences of material density. Although extremely subjective, Jacobi says that many clarinet players can feel these subtle differences with regard to overall intonation, tone color, and air resistance between two barrels with the exact measurements.

Although highly subjective, the biggest aspect affected by a change of barrel is the perception of tone color or quality. According to Jack Brymer, author of the book *The Clarinet*, ebonite (hard rubber) gives ease and clarity of sound with light articulation while a dense natural wood with considerable thickness provides a “darker” and full-bodied sound.¹¹⁰ The popular conception today is that material type will drastically affect tone quality and tone color. Today, barrels are made from a wide variety of materials including hard rubbers, plastics, composite resins, and wood materials.

Although this popular belief among clarinetists effectively puts material type above the acoustical properties of certain bore dimensions, Mark Jacobi believes it is really more about the overall bore dimensions that will affect the quality of the tone and less about the type of material from which the barrel is made.¹¹¹ However, Jacobi has experienced several instances where material type was given priority over specific bore dimensions.

5.7 The Mark Jacobi “Lucky #7” Barrel

Upon request, Mark Jacobi will create a customized barrel for a customer. However, he would prefer to modify an existing barrel than to completely fabricate a new one.¹¹² Many top

¹⁰⁹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹¹⁰ Jack Brymer.

¹¹¹ Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

¹¹² Mark Jacobi. Interview by John Coppa, Philadelphia, PA, April 15-17, 2014.

clarinetists from around the country including Richard “Richie” Hawley of the Rice University School of Music use his “Lucky #7” barrels.

The creation of the “Lucky #7” barrel was a joint collaboration between Mark Jacobi and Richard Hawley. The two fabricated many different versions of the barrel, each labeled with a number corresponding to the specific bore reamer size used to shape the inside bore. After making and testing each of the various barrels, the barrel bored with the number seven reamer seemed to work the best on Hawley’s *Tosca* Bb clarinet and was thus nicknamed “Lucky #7”.¹¹³ Once completed, the finished barrel was left unlabeled and was simply embossed with a numerical “7” denoting that it was the seventh barrel made.¹¹⁴

The “Lucky #7” barrel was an attempt to create a ‘reverse-taper’ barrel similar to the Moennig ‘reverse-taper’ barrel that would work well specifically with the Buffet-Crampon *Tosca* model Bb clarinet. Similar to the Moennig version for the Buffet-Crampon R13 model, Jacobi’s barrel employs a taper with ‘V’ shaped ‘reverse-taper.’ Although the ‘reverse-taper’ design is similar to the Moennig barrel, the specific bore depth dimensions are a closely guarded secret. Other aspects such as the length of taper, the length of (or lack of) the “choke,” and overall length of the barrel are also a closely guarded secret.¹¹⁵ Hopefully, the collaboration between Hawley and Jacobi will prove to be advantageous for clarinet players around the world, yielding a superior barrel that will correct more of the issues associated with tuning and intonation on the clarinet.

¹¹³ Hawley, Richard. Interview by John Coppa, Baton Rouge, LA, 2014.

¹¹⁴ Richard Hawley. Interview by John Coppa, Baton Rouge, LA, 2014.

¹¹⁵ Richard Hawley. Interview by John Coppa, Baton Rouge, LA, 2014.

5.8 Conclusion

Since the development of the barrel section, instrument makers have pushed to improve the acoustic and tuning possibilities available to instrumentalists. By exploring the aspects of bore shape, bore circumference, and length of the barrel section, a better clarinet barrel has been developed. As Mark Jacobi continues to study the work of Hans Moennig and perform repair work on the clarinets of top professionals in the field, he continually strives to improve the instrument beyond its preconceived limitations.

CHAPTER 6: CONCLUSION

Through the research process, this project has explored the lineage of exceptional clarinet repair in the Philadelphia area and addressed the reasons why Mark Jacobi's repair work is so highly sought-after. From the earliest craftsman in Philadelphia, such as Jacob Anthony, tracing the lineage from the Chedville family to Hans Moennig, and finally through to Mark Jacobi has shown the constant demand and need for artistic-level craftsmanship.

Many close friends and customers of Mark Jacobi have contributed their thoughts and opinions on Jacobi and his work. The greatest performers and pedagogues of the twentieth and twenty-first centuries have provided first-hand testimony regarding their personal experiences with Jacobi. Their gracious contribution to this project has portrayed Jacobi not only as an exceptional craftsman, but also as a human being capable of so much creativity and spontaneity.

The history and advancement of the clarinet barrel was presented to outline an aspect of clarinet related innovation that both Moennig and Jacobi have experimented with. The reasons why the 'reserve-taper' design has improved clarinet playing were explored while citing specific clarinetists like Ignatius Gennusa and Richard "Richie" Hawley.

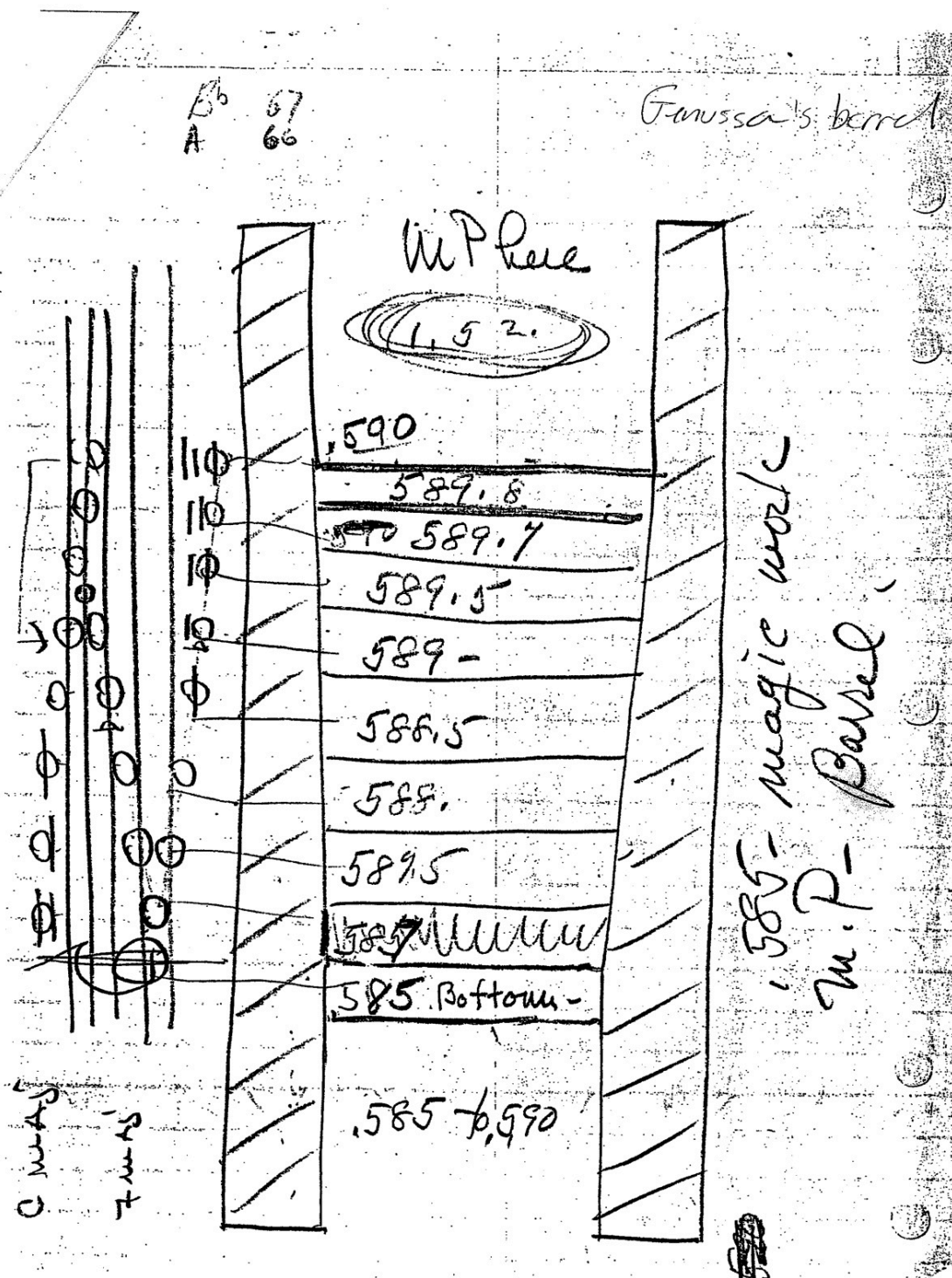
Finally, as the lineage of quality clarinet repair continues to grow, it is imperative that craftsmen like Mark Jacobi have a system for training the future generations of repair technicians. This project has outlined the specific techniques that Mark Jacobi uses to train his apprentices, giving them the knowledge to continue repairing instruments at a level similar to that of Moennig and himself. The systematic approach used by Jacobi specifically addresses repair procedures in the order that they are most commonly seen. It is important that great craftsmen and tradesmen of instrumental repair pass on their knowledge so that the field continues to grow and propel the standards for exceptional levels of craftsmanship forward.

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APPENDIX A: DRAWING OF HANS MOENNIG BARREL BORE DIMENSIONS BY
IGNATIUS GENNUSA



APPENDIX B: HANS MOENNIG LETTER TO DAVID WEBER FROM JUNE 8TH, 1972

PHONE, LOCUST 3-4172

W. Hans Moennig

WOODWIND INSTRUMENTS
AND REPAIRING

15 SOUTH 21ST STREET
PHILADELPHIA, PA. 19103

1972

JUN 8 1972

Dear Dave:

So we both didn't think of the barrel bore size any more after all. I saw the writing on the bag in which you had put the bottle of wine, thank you very much Dave. The label looks very promising and I shall let you know what I think of the contents in a week or so

→ X The bore size of the barrels should be 14.75 mm on the mouthpiece side and 14.60 on the lower end, which is what I make the bore for A clarinet. If there is any doubt, rather lean bore a little smaller, as I can always plane it bore larger, and the barrels need not have the Buffet stamps (I'd prefer them stamped of course).

By the way is Carrie's home address as follows 78, route de Horten, 78, Mantes-la-Je

Many again, Dave + Sincerely,
Hans.

APPENDIX C: LIVE INTERVIEW QUESTIONS FOR MARK JACOBI

The following questions were presented to Mark Jacobi during the live interview process conducted from April 15, 2014 through April 17, 2014.

Personal History

- 1.) When and where were you born?
- 2.) Were there other places you moved to/grew up?
- 3.) Where did you go to grade school and middle school?
- 4.) Where did you go to high school?
- 5.) What types of music are you most interested in?
- 6.) Who are/were your parents? (Names, Dates, Places of birth)
- 7.) Describe your parents.
 - a. What were their hobbies/favorite activities?
- 8.) Describe the influence your grandparents had on your upbringing.
- 9.) What is your family's country/countries of origin?
- 10.) What did your parents do for a living?
- 11.) Do you have any siblings?
 - a. If so, how did they contribute to your career path?
- 12.) What careers do your siblings have?
- 13.) What is your instrumental background?
- 14.) What instruments do/did you play?
- 15.) Did you have any jobs growing up? What were those jobs?
- 16.) Did you play in any ensembles in grade school and high school?
- 17.) Where did you go to college?

- 18.) Why did you choose that particular college?
- 19.) What was your major in college? Why did you choose it?
- 20.) Did you play music professionally before getting interested in repair?
- 21.) What career path did you want for yourself when you were younger?
- 22.) Did your parents want you to pursue a particular career?
- 23.) As a young adult, were you involved in any clubs or extra curricular activities?
- 24.) Have you always been technically savvy/ mechanically inclined?

Professional History

- 1.) When were you first interested in repairing musical instruments?
- 2.) Who did you study with in order to learn repair?
- 3.) Was there a special person that advised you to pursue repair?
- 4.) Did you apprentice with anyone in repair?
- 5.) Did you go to school for instrument repair?
 - a. If so, where did you attend?
- 6.) How many years did you spend training to be a repair technician?
- 7.) When did you open your repair shop in Philadelphia?
- 8.) Why did you pick Philadelphia to locate your business?
- 9.) Have you worked with anyone in your business? (i.e. Co-owned a business together)
- 10.) How long have you been in business repairing clarinets?
- 11.) Have you ever worked for someone other than yourself in this field?
- 12.) What other jobs have you held outside of the music business?
- 13.) Who are the most prominent clarinetists you have worked with?
- 14.) Are there any special projects you are developing?

- 15.) Have you ever been contracted by any major company for design/repair purposes?
- 16.) In studying repair, what aspects were the hardest to master?
- 17.) What is your connection to the Buffet Moennig Barrels?
- 18.) When was the first time you realized what you were doing was special?
- 19.) What aspects of clarinet design are you most comfortable changing?
- 20.) What aspects of clarinet design are you LEAST comfortable changing?
- 21.) What model of clarinet is your favorite to work on? Why?
- 22.) What model of clarinet is your least favorite to work on? Why?
- 23.) Have you published any materials on clarinet repair?
- 24.) Do you manipulate anything inside the bore for intonation or otherwise?
- 25.) What are the most common problems of the modern Boehm system clarinet in your opinion?

Hans Moening

- 1.) What are the dates for Hans Moennig?
- 2.) Where was Hans Moennig born?
- 3.) Who did he study with, if any, in instrument repair and design?
- 4.) What were the innovations the Moennig made to the clarinet?
- 5.) What other instruments did Moening work on besides clarinets?
- 6.) Where did Moennig work? Who did he work for?
- 7.) What were Moennig's design principles and philosophies?
- 8.) When did he come up with the idea for the 'reverse-taper' barrel?
- 9.) When did Buffet start producing the barrels?
- 10.) Were there other bore concepts that Moening invented?

APPENDIX D: ONLINE QUESTIONNAIRE REGARDING THE LIFE AND WORK OF MARK JACOBI

The following are responses from an online questionnaire presented to several close friends, colleagues and customers of Mark Jacobi. The questionnaire was given to each participant via an online link to a Google form. All participants filled out the questionnaire under their own free will and were not guided in their answers in any way. Each response is presented exactly how it was submitted and has not been altered for corrections in anyway.

Online Questionnaire Response from Gregory Raden

Date: 8/28/2014

1.) Name (First, Last).

Greg Raden

2.) Age.

44

3.) Current Occupation.

Principal Clarinet, Dallas Symphony

4.) Number of years you have played the clarinet.

34

5.) When and where did you first meet Mark Jacobi?

I first met Mark in 1986-87 in his shop in Philadelphia on 20th and Chestnut.

6.) How did you come to know Mark Jacobi and what circumstances led you to seek out his expertise?

I was in high school studying with David Weber and he said my instruments needed work and to go see Mark Jacobi in Philadelphia. Up until then I hadn't really had anyone service my instruments and didn't know any better. After Mark was finished, I was amazed at the difference!!

7.) How long have you known/worked with Mark Jacobi?

27 or 28 years

8.) Describe how often you visit Mark for repair work.

When I lived and worked in the Northeast, I would see him more frequently. While a student a Curtis, I would go hang out in his shop and watch him work, chat, and of course have do work on my horns.

9.) Describe some of the repair work Mark has done for you. (Give several examples, if possible)

Besides basic set-up of an instrument, (seating pads, spring tensions, key heights, tightening the action, etc) I have spent many, many hours with Mark, voicing notes for timbre and intonation. Trying to get full resonance on each note.

10.) Describe your thoughts on the quality Mark Jacobi's work in as much detail as possible.

Mark is a true artist. His work is meticulous. Not only does it function absolutely perfectly but it looks beautiful. Every cork, pad, felt, etc. are perfectly shaped and trimmed. The tones holes are finished evenly and the undercutting has no gauges or rough edges.

11.) What makes Mark Jacobi's work different for other repairmen in your opinion?

As I said in the previous question, his work is meticulous. What also makes Mark's work truly special is that he has a fantastic ear for sound. He is quite a good clarinetist as well having studied with Mike Guerra, Anthony Gigliotti, and of course being around some of the great players in his shop for many years. Harold Wright was a favorite of his as well as Donald Montanaro who has worked with Mark at great length on many of his instruments voicing them to find the perfect combination of resonance, center, and correct intonation on each note.

12.) Describe the experience of getting your instruments repaired by Mark Jacobi.

First of all, when Mark hands you back your instruments the mechanics are so smooth, quiet, and efficient. Then, I have spent many hours sitting with Mark voicing notes. I'll tell him my "issue" with the note and he will listen and have me play the note and say "ok, let me have a look". He then decides what he wants to do and does a little and has me try it again. It is ALWAYS an improvement! Then I usually ask if there is more room to go and he will advise me if he thinks we are at the limit or not. Sometimes he will test the instrument himself. He plays with perfect production and makes a beautiful sound!

13.) What specialty projects, if any, have you worked on with Mark Jacobi in the past? (Optional)

Over the 28 years I have worked with Mark he has made barrels, made hard rubber inserts for barrels, tuning rings for various places, tone hole inserts, repositioned the

register tube, drilled a hole in my bell, made keys, shortened mouthpieces, reamed barrels, and more!

14.) Was there any type of repair that you needed which Jacobi could not do or refused to do? If so, please describe.

None

15.) Since Philadelphia has been the home to many great repairman including Henry Chedville, Hans Moennig and now Mark Jacobi, what in your opinion has made this area the hub for quality clarinet repair in the United States?

Philadelphia was the birth of the American school of wind playing with the teachings of the great oboist Marcel Tabuteau. You had many of the countries finest wind players here in the Philadelphia Orchestra in the first part of the 20th Century. Tabuteau, Bonade, Walter Gehter, Kincaid, DeLancie, McLane, etc. It made sense to have the top repairmen in town and nearby other major musical hubs like New York.

16.) Story #1: Describe an interesting experience or encounter you had with Mark Jacobi.

One thing all of Mark's clients know is that he works slowly. You can't rush him. You just have to plan that it will take awhile. We all joke about it but the end result is so spectacular that we just laugh about it as one of Mark's quirks and say "That's Mark!"

17.) Story #2: Describe a second interesting experience or encounter you had with Mark Jacobi.

I remember several meals with Mark and David Weber that were quite entertaining! Mark would just sit there smiling and shaking his head at Mr. Weber's antics.

18.) Story #3: (Optional) Describe any additional experience you had with Mark Jacobi not mentioned above that you would like to include.

No response.

19.) Please add any additional information about Mark Jacobi that you would like to include. (Optional)

I would like to say how fortunate I feel to have met Mark at an early age. His is the standard I became used to. I am amazed when I try other peoples instruments who just had work done by repair person ""x"" or ""y"". Mark is the gold standard. Personally, I have been lucky to have developed a close friendship with Mark over the years. He is kind-hearted, generous, creative and an all around great guy.

1.) Name (First, Last).

David Gould

2.) Age.

39

3.) Current Occupation.

Musician/AR director for Vandoren/DANSR inc.

4.) Number of years you have played the clarinet.

30

5.) When and where did you first meet Mark Jacobi?

His work shop on Chestnut St. in Philadelphia in 1993.

6.) How did you come to know Mark Jacobi and what circumstances led you to seek out his expertise?

My teacher, David Weber, told me I must take my clarinets to Mark because he was the best. Other teachers that I had concurred including Stanley Drucker.

7.) How long have you known/worked with Mark Jacobi?

Since 1993

8.) Describe how often you visit Mark for repair work.

3-4 times a year. I have many instruments (a flat, e flat, c, b flats, a's, a basset horn, and a bass clarinet...he's even fixed a contrabass I needed to play) to maintain and I generally have one worked on at a time.

9.) Describe some of the repair work Mark has done for you. (Give several examples, if possible)

Complete overhauls, changed register tubes for a custom model, glued cracks, tuning work instruments, an amazing e flat clarinet barrel...

10.) Describe your thoughts on the quality Mark Jacobi's work in as much detail as possible.

He is the best. You can never tell that he has been there, except that your instrument works great. He is meticulous down to every detail.

11.) What makes Mark Jacobi's work different for other repairmen in your opinion?

I think Mark considers every aspect of every movement that a clarinet key makes. He makes sure that the pads he uses actually have integrity against leaks. He always looks for the materials that are the best for the job. He pays attention to the minutest details all the time. Nothing leaves his hands unless he is satisfied with the job and he has the highest standards of all.

12.) Describe the experience of getting your instruments repaired by Mark Jacobi.

Its an all day affair. I try and arrive as early as possible (generally that is 10am) and he works til [*sic*] lunch, then we go out, and back at it til [*sic*] he finishes. That could be 5pm-8pm. We sit together and talk about everything, often times talking about the past. He will often show me the problem and talk about different ways to solve it. We listen to music together. We both liked the group "little feat" we would also listen to French music. He even introduced me to Reuben Blades' music.

13.) What specialty projects, if any, have you worked on with Mark Jacobi in the past? (Optional)

Resonators, bumpers for keys, barrels...

14.) Was there any type of repair that you needed which Jacobi could not do or refused to do? If so, please describe.

Never... One time I brought him a Leblanc "paperclip" contrabass clarinet for me. He did not enjoy it, he even complained about how hard it was to work on being large and heavy. But I left with a great working instrument.

15.) Since Philadelphia has been the home to many great repairman including Henry Chedville, Hans Moennig and now Mark Jacobi, what in your opinion has made this area the hub for quality clarinet repair in the United States?

I am not sure about Henri Chedeville's impact on Philadelphia, but I do know the Moennig attracted clarinetists from all over the country. He was "the" repairman as I knew it. I believe Mark had spent some time with Moennig, not as an apprentice but more like a client, and picked up on the traditions shared by many of the area players from that area.

16.) Story #1: Describe an interesting experience or encounter you had with Mark Jacobi.

The first time I met Mark, I was a student at Juilliard. I went to see him and have my clarinets worked on. I took a super early amtrack train and got to Market St Station around 8:30 am and walked over to his atelier. We got to know each other throughout the day. He bought me lunch and dinner and charged me some ridiculously low amount for a day's work. I was back waiting at market street station around 10pm and got back to the dorm around 12:30 am, but man, my clarinets played like I never knew a clarinet could work.

17.) Story #2: Describe a second interesting experience or encounter you had with Mark Jacobi.

We share a passion for France and French food. My teacher David Weber, Mark, Josh Kovach and I went to a famous French restaurant in Philadelphia "Le bec fin" for a lunch meal that was amazing. It was my first experience (even after living in France) a super fancy French restaurant. We all had a lot of fun that day! We did go a few other times, sadly, he just told me that the restaurant closed.

18.) Story #3: (Optional) Describe any additional experience you had with Mark Jacobi not mentioned above that you would like to include.

There are so many... but Mark played clarinet at my wedding. He joined a group I put together and they played for the processional and recessional. David Weber, Philippe Cuper, Dalia Levi Minzi (Cuper's assistant prof at Versailles' conservatory, Mark, Paul Corn(my predecessor at Vandoren now an AP of music on Staten Island), and Randy Hall (classical saxophonist that was roped into playing bass clarinet that morning) played clarinets, Geoffrey Shamu (Shires Brass) played piccolo trumpet.

19.) Please add any additional information about Mark Jacobi that you would like to include. (Optional)

Mark has old school values. This is refreshing. You do not get priority over anybody no matter your status as a clarinetist. The scheduled appointment gets the priority. He cares deeply about all of his clients. He feels that they all deserve the best he can give. He loves scrapple and chipped beef....

1.) Name (First, Last).

Mark Nuccio

2.) Age.

51

3.) Current Occupation.

Musician (Associate Principal and Eb Clarinet with New York Philharmonic)

4.) Number of years you have played the clarinet.

41

5.) When and where did you first meet Mark Jacobi?

I met Mark as a member of the Pittsburgh Symphony in the late 90's

6.) How did you come to know Mark Jacobi and what circumstances led you to seek out his expertise?

Mark was always reputed to really have no peers with regard to his repair skills. When I won the position with the NY Phil, I realized that I would only be 2 hours away from his shop and that this was a wonderful opportunity to work with the best.

7.) How long have you known/worked with Mark Jacobi?

Since the late 90's

8.) Describe how often you visit Mark for repair work.

Because of the busy NY Phil schedule and the distance needed to travel, it is only once or twice per year.

9.) Describe some of the repair work Mark has done for you. (Give several examples, if possible)

Mark is capable of doing anything and has done much custom work for me including moving thumb rests, fixing cracks, undercutting, adjusting the positions of keys,

adjusting barrel bores, etc... When he is finished, you can't even see where he worked...but you feel it! Awesome!

10.) Describe your thoughts on the quality Mark Jacobi's work in as much detail as possible.

See Above

11.) What makes Mark Jacobi's work different for other repairmen in your opinion?

Mark is methodical, to say the least, but when he is done, his work lasts a long time. It really is well-thought out and done to perfection.

12.) Describe the experience of getting your instruments repaired by Mark Jacobi.

His work is fabulous and very focused. We have nice conversations and usually after an entire day of that, I go home. It can be a long day but he works until he gets it done.

13.) What specialty projects, if any, have you worked on with Mark Jacobi in the past? (Optional)

Barrel work

14.) Was there any type of repair that you needed which Jacobi could not do or refused to do? If so, please describe.

Never!

15.) Since Philadelphia has been the home to many great repairman including Henry Chedville, Hans Moennig and now Mark Jacobi, what in your opinion has made this area the hub for quality clarinet repair in the United States?

Probably the location of the Curtis Institute as well as the low cost of living (compared to New York City).

16.) Story #1: Describe an interesting experience or encounter you had with Mark Jacobi.

One time I had a register key that tended to stick when I tried to release the key. I took it to Mark and after he custom made a pad for it, he inserted it in the key. It looked great and felt quite good but he was not happy and would not let that instrument out of his sight until it was perfect. ONE HOUR LATER and some very focused work, he was finally pleased and was able to move onto something else. Most repairman would do that, for better or for worse, in 2 or 3 minutes. Mark was focused on perfection!

17.) Story #2: Describe a second interesting experience or encounter you had with Mark Jacobi.

See Above

18.) Story #3: (Optional) Describe any additional experience you had with Mark Jacobi not mentioned above that you would like to include.

No response

19.) Please add any additional information about Mark Jacobi that you would like to include. (Optional)

Mark has worked with most of the best clarinetists in the world and there is a reason for that. He is amazing at his craft and continues to be enthusiastic about raising the bar, but also keeping the tradition of a ring in the sound for the "SOPRANO" Clarinet. This seems to be somewhat of a dying art but thank God Mark is still present to continue the French school of clarinet playing. He is a one-of-a-kind!

APPENDIX E: PHOTOGRAPHS OF MARK JACOBI



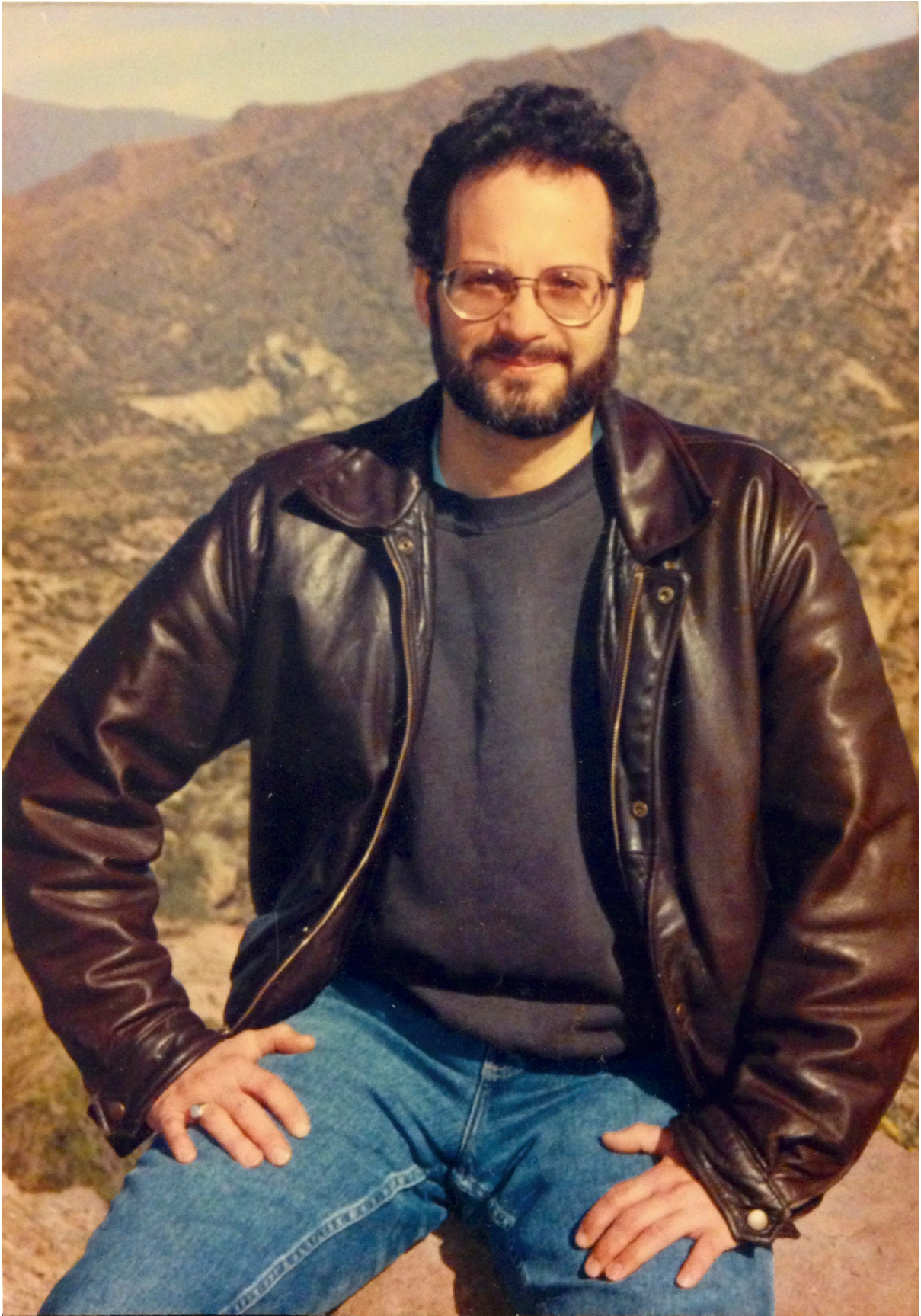


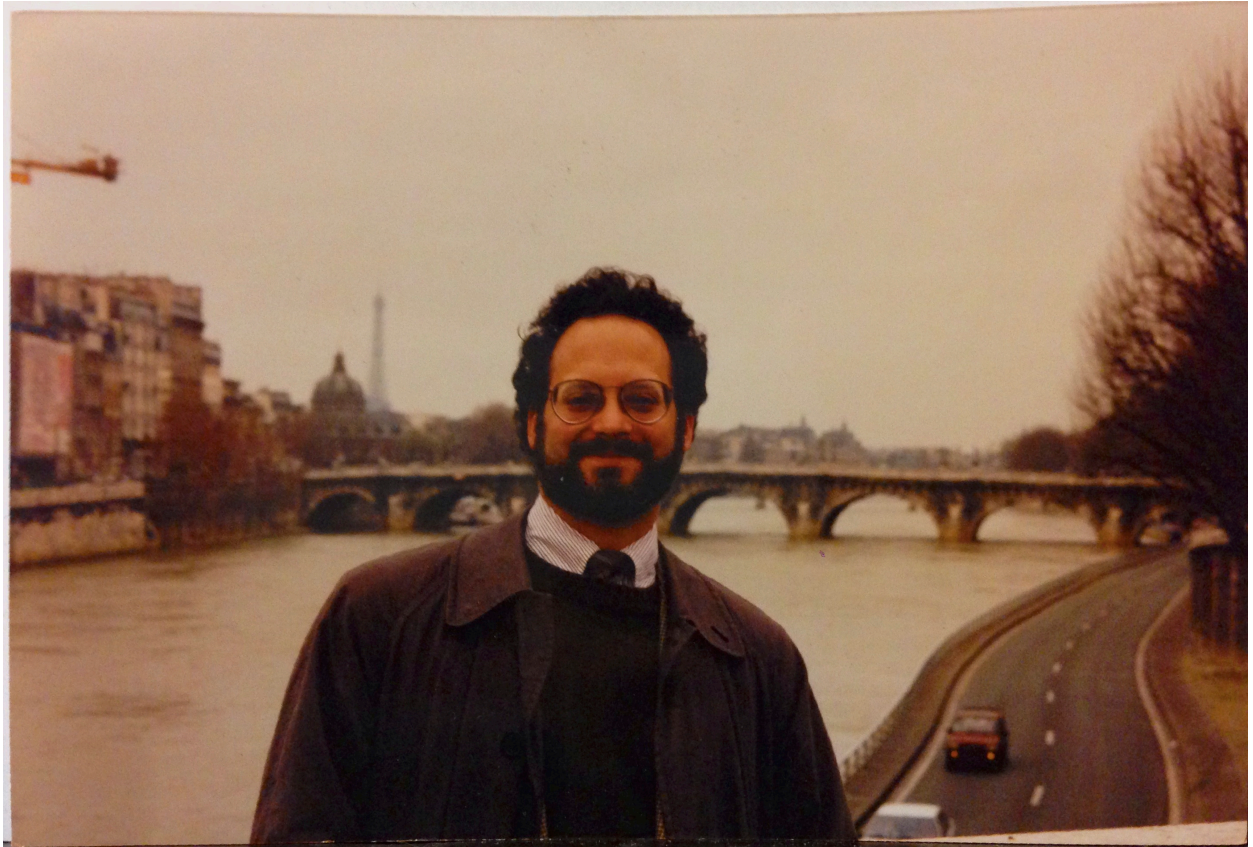




























APPENDIX F: IRB EXEMPTION CORRESPONDENCE

IRB #E9105

Institutional R Board <irb@lsu.edu>
To: John A Coppa <coppaempire@gmail.com>

Tue, Nov 25, 2014 at 11:12 AM

After reviewing your application, The Life and Work of Mark Jacobi: Clarinet Repair in Philadelphia and the Influence of Hans Moennig, it was determined that IRB approval is not necessary in this case. If you have any IRB-related questions in the future, please do not hesitate to contact us.

Thank you,

Institutional Review Board

Louisiana State University

Jason Pasqua, Coordinator

130 David Boyd Hall

P: (225) 578-8692

F: (225) 578-5983

irb@lsu.edu | www.lsu.edu/irb

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VITA

John Anthony Coppa was born in 1984 and is a native of West Palm Beach, Florida. Currently in his last semester as a Doctor of Musical Arts candidate, he plans to graduate from Louisiana State University in December of 2014. He received a Bachelor of Music in Performance from the University of Central Florida where he double majored in Business Marketing. As a professional clarinetist, Mr. Coppa has performed with the Baton Rouge Symphony Orchestra, Rapides Symphony Orchestra, Acadiana Symphony Orchestra and currently serves as Assistant Principal Clarinet with the Louisiana Sinfonietta. He also served on the Artistic Committee for the 2014 ClarinetFEST conference hosted on the campus of the Louisiana State University. Mr. Coppa has also served on the faculty of Kids Orchestra of Baton Rouge, a non-profit music program for inner-city youths, where he was the organization's first clarinet instructor. Additionally, his teaching experience includes teaching graduate level courses in clarinet repair and reed making at Louisiana State University.